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UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

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IN RE: NATIONAL)
PRESCRIPTION OPIATE) MDL No. 2804
LITIGATION)
_____) Case No. 1:17-MD-2804
)
THIS DOCUMENT RELATES)
TO ALL CASES) Hon. Dan A. Polster

- - -

Thursday, June 6, 2019
- HIGHLY CONFIDENTIAL -
SUBJECT TO FURTHER CONFIDENTIALITY REVIEW

- - -

Videotaped deposition of Henry Grabowski,
Ph.D., held at Alston & Bird, 555 Fayetteville
Street, Raleigh, North Carolina, 27601, commencing at
9:34 a.m., on the above date, before Karen Kidwell,
Registered Merit Reporter, Certified Realtime
Reporter.

- - -

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1 THURSDAY, JUNE 6, 2019, RALEIGH, NORTH CAROLINA

2 P R O C E E D I N G S

3 -oOo-

4 VIDEOGRAPHER: Good morning. We're now on
5 the record. My name is Trae Howerton. I'm the
6 videographer representing Golkow Litigation
7 Services. Today's date is June 6th, 2019. The
8 time is 9:34 a.m.

9 This deposition is being held in Raleigh,
10 North Carolina, In Re National Prescription
11 Opiate Litigation. This is filed in the United
12 States District Court for the Northern District
13 of Ohio, Eastern Division. The deponent is
14 Henry Grabowski.

15 All counsel will be noted on the
16 stenographic record. Our court reporter this
17 morning is Karen Kidwell. She will now swear in
18 the witness.

19 HENRY GRABOWSKI, Ph.D.
20 being first duly sworn, testified as follows:

21 EXAMINATION

22 BY MS. SUTTON:

23 Q. Good morning, Professor Grabowski. We
24 talked just briefly before the deposition started.
25 Thank you for being here today.

1 I understand, having looked through your
2 background, you've testified quite a few times, so I
3 don't think it's probably necessary to cover the
4 deposition ground rules. You probably know those
5 better than me.

6 So what I want to do is just get started
7 with the first three exhibits which I have marked.
8 Exhibit 1 is the notice of your deposition, and
9 Exhibit 2 is the expert report that we received from
10 you on May 10th, 2019, and it includes the appendices
11 and the exhibits that were served with it. And then
12 Exhibit 3 is a supplemental expert report we received
13 just about 48 hours ago, on June 4th, which I think
14 also has an exhibit. So those are the first
15 documents we're going to talk about.

16 And we'll probably want to keep your
17 expert report out through most of the deposition,
18 because we'll be coming back to that.

19 (Exhibit 1 was marked for identification.)

20 (Exhibit 2 was marked for identification.)

21 (Exhibit 3 was marked for identification.)

22 BY MS. SUTTON:

23 Q. With respect to Exhibit 1, the deposition
24 notice, have you seen this document before?

25 A. No, I have not.

1 Q. Okay. If you can turn to the third page,
2 there's an Exhibit A. And we had served this on your
3 counsel, requesting that you bring certain types of
4 documents prior to or at the deposition, to the
5 extent they existed. So maybe if we can just go
6 through those.

7 Category 1 asks you to bring any documents
8 or materials that you have reviewed since the date of
9 your report that are not specifically identified in
10 your report in preparation for your testimony. So
11 are there any additional documents beyond those that
12 are disclosed in your report and your supplemental
13 report that you have reviewed to prepare for this
14 deposition?

15 A. I don't believe so.

16 Q. Okay. So you don't have any other
17 documents that you haven't already described to
18 provide to me today?

19 A. Yes, I'm not sure when Rosenthal's errata
20 was produced. I think it was before the -- my
21 report.

22 Q. Yes, I think you disclosed the Rosenthal
23 errata in your report. I saw that.

24 Now, Number 2 was asking for basically
25 the -- the invoices that you had provided for your

1 work in this case. And we received those, I think,
2 at 3:30 in the morning from your counsel, and we'll
3 go through those a bit later. And we have invoices
4 from -- from yourself and also from Cornerstone.

5 Did anybody besides Cornerstone help you
6 in -- in your work on this report?

7 A. No.

8 Q. Setting aside counsel?

9 A. No.

10 Q. Okay. Your expert report that was served
11 to us on May 10th included your curriculum vitae,
12 your CV. Is that your most recent and current CV, or
13 do you have a more recent one since -- since that one
14 was provided to us on May 10?

15 A. That's my current one.

16 Q. Okay. I would ask that if you have any
17 changes to your CV prior to the trial that's
18 scheduled in October, we would really appreciate if
19 you could provide us with an updated copy of your CV.
20 Would you be willing to do that?

21 MR. MORRIS: Objection. And we'll take
22 that under consideration.

23 MS. SUTTON: Okay.

24 MR. MORRIS: I suspect that won't be a
25 problem.

1 MS. SUTTON: All right.

2 BY MS. SUTTON

3 Q. So we can look at Exhibit 2, which is your
4 report and all the materials that were served with
5 it. I want to direct your attention to the first
6 appendix, Appendix 1, which is your CV.

7 So just a few questions. Did you prepare
8 this CV?

9 A. Yes.

10 Q. Do you have a different CV that you use
11 for your nontestifying work?

12 A. No, this is the CV I used in academic
13 settings or any type of consulting.

14 Q. Okay. Does this CV list all the
15 professional organizations that you belong to?

16 A. You know, I'm a member of the American
17 Economic Association and the -- some other
18 professional associations, but they -- I'm not an
19 officer or editor, any official position. That's
20 just a member.

21 Q. Okay. So you said "the American Economics
22 Association and some other organizations." Do you
23 remember, can you recall what those are?

24 A. I think the American Society of Health
25 Economics -- Health Economists.

1 Q. Okay. Anything else?

2 A. Those were the ones I think I'm currently
3 affiliated with.

4 Q. Okay. So looking at Exhibit 2, which is
5 your -- your expert report and materials along with
6 the supplemental report, Exhibit 3, as you sit here
7 today, are these complete and accurate, to the best
8 of your knowledge?

9 A. Yes.

10 Q. Do you have any corrections that you would
11 like to make to either Exhibit 2 or 3?

12 A. I think they were listed, some typos were
13 listed in the supplement, Exhibit 3.

14 Q. Okay. So there's no -- you haven't
15 identified any other corrections you want to make
16 besides what's set forth in Exhibit 3?

17 A. That's correct.

18 Q. Okay. Do Exhibit 2 and 3 contain all the
19 opinions you intend to express in this case?

20 MR. MORRIS: Objection. Form.

21 THE WITNESS: Yes, unless I'm asked to do
22 something further.

23 BY MS. SUTTON:

24 Q. Have you been asked to do anything in
25 addition to what's -- what you were requested to do

1 in these reports?

2 A. No.

3 Q. Did you rely on anything else beyond what
4 is mentioned or cited in your report and in the
5 attachments to your reports?

6 A. No.

7 Q. Okay. When did you finish the
8 supplemental expert report?

9 A. I finished it I think two days ago.

10 Q. Okay. Now, looking at Exhibit 2, I wanted
11 to kind of walk through the appendices and make sure
12 that I understand them.

13 So Appendix 1 is your CV. Appendix 1 is
14 your CV, right?

15 A. Yes.

16 Q. Okay. And Appendix 2, that's the -- your
17 list of testimony in the four prior years, correct?

18 A. Yes.

19 Q. And then Exhibit -- or Appendix 3 is a
20 listing of the materials that you considered?

21 A. Yes.

22 Q. And then you have Appendix 4A through 4C.
23 And this seems to be a schedule of opioids that were
24 sold by Endo; is that -- is that correct?

25 A. Yes.

1 Q. Okay. Did you prepare these charts?

2 A. It was prepared under my direction at
3 Cornerstone and at a request of the attorneys.

4 Q. So did the attorneys request that this
5 book be put together?

6 A. They requested that I do some market share
7 analysis to -- in the report, and I instructed
8 Cornerstone to do so.

9 Q. Okay. What -- what did you do to verify
10 that this information was correct, that's set forth
11 in these schedules?

12 A. I looked at some of the -- the
13 IQVA Xponent data. I looked at it in detail. And I
14 did some summary checks.

15 Q. So then if we turn to the -- the exhibits
16 that are attached to your report, Exhibit -- Depo
17 Exhibit Number 2. You have Exhibit 1, 2A, and 2B.
18 And these are adjustments to some of Dr. Rosenthal's
19 calculations, correct?

20 A. Yes.

21 Q. And who prepared these?

22 A. Well, I -- they were done under my
23 direction at Cornerstone. And these are the
24 conclusions, and I checked some of the inputs to see
25 that I was satisfied that Cornerstone had executed my

1 directions.

2 Q. Did the attorneys ask you to perform these
3 adjustments?

4 A. No.

5 Q. So it was your idea to do this?

6 A. Yes.

7 Q. Okay. And then just briefly looking at
8 your supplemental report that we received on
9 June 4th, it also has exhibits attached to it,
10 Exhibits 1, 2A, and 2B, and these also seem to be
11 adjustments to Dr. Rosenthal's calculations; is that
12 correct?

13 A. Yes.

14 Q. And why did you do these?

15 A. Well, they were part of my report.
16 It's -- you know, I -- I found various problems and
17 limitations with Dr. Rosenthal's model, so I -- the
18 first line is -- is her preferred model, and then the
19 subsequent lines are various changes in terms of the
20 depreciation rate, demand side variable, different
21 treatment of time trend. So those were all
22 adjustments to show that her model was not very
23 robust, or reasonable adjustments. And this -- the
24 one in here is based on the code that she submitted
25 with her errata.

1 Q. And you asked -- did you perform these
2 analyses? Or again, did Cornerstone do them?

3 A. Cornerstone did them under my direction.
4 They did the number crunching, but I proposed what
5 was to be done, and then I checked it.

6 Q. Okay. Let's talk a little bit about your
7 educational background and -- and work history, and
8 it might be helpful to have your CV in front of you,
9 but I'm sure you remember all of this well.

10 You received your Ph.D. in economics in
11 1967 from Princeton University?

12 A. Yes.

13 Q. Okay. So that was 52 years ago. I know
14 that, because I was born in '67. Then you went on to
15 teach at Yale from 1967 to 1971, correct?

16 A. Yes.

17 Q. And then you were a research associate at
18 the National Bureau of Economic Research. Can you
19 tell me a little bit about what you did there?

20 A. Well, I was a member of the -- visiting
21 scholar research associate physician, and I actually
22 worked on some advertising issues, a project
23 involving -- that resulted in two subsequent
24 publications, the interindustry distribution of
25 advertising and the intraindustry impact of

1 advertising.

2 So this was mainly consumer -- advertising
3 to consumers in major media, and I was looking at
4 some hypotheses that had been put forth by Professor
5 Galbraith and others.

6 Q. Were you focusing on the impact of
7 advertising on any particular industry?

8 A. Well, the first publication looked at
9 several industries, you know, industries like
10 consumer goods, toiletries, tires, various -- you
11 know, I -- I looked at industries that had
12 significant major media advertising and -- and looked
13 at the impact there. And then in the intraindustry,
14 I looked at five industries that did a lot of major
15 media advertising, including alcohol and cigarettes.

16 Q. Okay. And then you joined Duke University
17 in 1972?

18 A. Yes.

19 Q. And -- and you've been employed there ever
20 since?

21 A. Yes.

22 Q. Okay. And it looks like from your résumé
23 that you were a professor until 2009, when you became
24 a professor emeritus; is that correct?

25 A. Yes. That meant I no longer had teaching

1 responsibilities, but I continued as a director of a
2 program.

3 Q. Okay. So since 2009, you have -- you have
4 no longer -- you no longer teach classes at
5 Duke University?

6 A. That's correct.

7 Q. Okay. And prior to 2009, did you teach
8 undergraduates?

9 A. I taught undergraduates and graduates.

10 Q. Okay. Is it -- I know it's kind of a wide
11 span of time, but can you just give me an overview of
12 the types of classes that you -- you taught from 1972
13 to 2009?

14 A. Okay. So when I first came to Duke, I
15 taught both undergraduates in -- in microeconomics
16 and econometrics, and I taught graduate courses in
17 what we called industrial organization, which is the
18 study of competition and factors that influence
19 competition in particular industries.

20 And then, as time evolved, I did some
21 teaching of health economics, innovation. I did some
22 senior seminars for honor students over time. And I
23 continue to do graduate classes in industrial
24 organization.

25 Q. So you mentioned that since 2009 you no

1 longer teach classes, and that your work I think
2 centers on the program in pharmaceutical and health
3 economics. Were you the director? Is that correct?

4 A. Yes.

5 Q. Okay. So is it possible for you to just
6 like tell me how many hours a month you devote to
7 your work at Duke as professor emeritus?

8 A. I would say maybe 20 hours a -- a week.
9 You know, the -- it's like a -- more like a
10 half-time.

11 Q. So 24 hours a week every week since 2009,
12 on average?

13 MR. WILSON: 20.

14 THE WITNESS: 20 hours.

15 BY MS. SUTTON:

16 Q. 20 hours. I'm sorry.

17 A. Yes. I would say that's a -- you know, a
18 rough average. Sometimes it's a lot more; sometimes
19 it may be less.

20 Q. Okay. So let's take like last month, for
21 example. How much time did you spend in your role as
22 professor emeritus at Duke?

23 A. Well, we're doing a major paper with --
24 I'm doing it with Joe DiMasi on R&D cost and returns
25 of oncology drugs. And so related to that and

1 conferences and -- that were related to the program
2 in pharmaceutical and economics, we're talking about
3 last month, the month of May, I would say, you know,
4 maybe 75 hours.

5 Q. A week, or a month --

6 A. For the month.

7 Q. -- for the entire month?

8 A. Yeah.

9 Q. And is that more than -- more hours than
10 you would typically spend, because of all the -- all
11 the things that are going on that you described?

12 A. As I said, it -- it averages -- there may
13 be some months when I'm not doing much at Duke, and
14 then others where I'm doing full 40 hours, or -- you
15 know, I'm still invited to give lectures, and I still
16 get together with colleagues to discuss potential
17 projects for the program.

18 Q. And so in some of those hours when you're
19 not doing as much at Duke, is that sometimes because
20 you're busy acting as an expert witness?

21 A. That's one of the factors. But it's more
22 like I've gone on vacation or something like that.

23 Q. But you oftentimes act as an expert?

24 A. Yes.

25 Q. So you've been the director of the program

1 in pharmaceuticals and health economics since 1983?

2 A. Right. So there -- there was -- the
3 program really evolved before that, but it was not an
4 official program of Duke until 1983.

5 Q. Can you tell me a little bit about its
6 structure and how it works within Duke? Is it part
7 of the department of economics, or . . .

8 A. Yes. It's administered through the
9 economics department and through the School of Arts
10 and Sciences. I'm the director, and it's -- you
11 know, it's a mechanism for supporting graduate
12 students, for supporting summer research on projects
13 that relate to pharmaceuticals and health economics.
14 It can pay for travels to present results at
15 professional conferences. That's kind of mainly what
16 the functions are.

17 Q. What's the -- the annual budget for the
18 program?

19 A. Right now it's less than it was at one
20 point in time, but I would say right now the annual
21 budget is maybe 60,000 a year.

22 Q. And so has it -- has the annual budget
23 been higher than that in other years?

24 A. Way back when, in the '80s, it was higher,
25 yes.

1 Q. Can you tell me how much higher it was?

2 A. It might have been as much as 100,000.

3 Q. Okay. And where did the -- where did the
4 funds come from that support this program?

5 A. Over the years, they've come from various
6 sources. They came from the National Science
7 Foundation, from organizations like the General
8 Accounting Office and the Institute of Medicine.
9 They came from foundations, and they came from
10 corporate grants.

11 Q. And do those corporate grants include
12 grants from pharmaceutical companies?

13 A. Yes.

14 Q. Do they include grants from biotech or
15 medical device companies?

16 A. Yes.

17 Q. Are you -- is it possible for you to
18 characterize over time what percentage of the funding
19 has come from pharmaceutical companies?

20 A. That would be hard to do. I think it --
21 it varied over different periods. At some points it
22 was mainly government; other times it was foundation
23 or corporate grants.

24 Q. But certainly included money from drug
25 companies?

1 A. Yes.

2 Q. Okay.

3 A. But to Duke University.

4 Q. Yeah. And -- okay. So it goes to
5 Duke University, but then is it earmarked for -- for
6 the program in pharmaceuticals and health economics?

7 A. Yes.

8 Q. Okay. Is there -- is there anywhere I
9 could go to look to see who -- what companies have
10 provided grants to the program in pharmaceutical and
11 health economics?

12 A. No, I never -- you know, I never had a
13 website. It predates websites, and --

14 Q. Right.

15 A. -- I never put that together here.

16 In -- in recent years, it is -- I should
17 have also mentioned, there's an endowment, and the
18 endowment is mainly what sustains the program now.

19 Q. And the -- is the endowment the money that
20 was built up over time through the various grants and
21 donations that were received, or . . .

22 A. No.

23 Q. Okay. How was the -- how was the
24 endowment created?

25 A. The endowment was created from

1 GlaxoWellcome Company in a grant to Duke University
2 to -- for this program and -- and for minority
3 scholarships.

4 Q. Do you know the size of the endowment from
5 GlaxoSmithKline?

6 A. You know, initially it was maybe 100,000,
7 but it's grown through investments.

8 Q. Do you know, how large is the current
9 endowment?

10 A. What I know is how much income it
11 generates each year that can be used by the program.
12 And that's -- let's see. It's on the order of -- I
13 think it's on the order of \$30,000 income.

14 Q. Okay. Do you know if your -- the program
15 in pharmaceutical and health economics has ever
16 received any funding from Purdue Pharma?

17 A. It has not.

18 Q. Okay. Were you involved in reaching out
19 to the pharmaceutical companies in order to get
20 grants or funding for -- for your program in
21 pharmaceutical and health economics at Duke?

22 A. That was mainly done by the development
23 group at Duke. The endowment came through a reaching
24 out by the Duke development office to GlaxoWellcome
25 to support activities at Duke. And as I indicated,

1 at the time I got my endowment they also funded
2 minority scholarships and other things at Duke, but
3 this is one of the things that was funded through the
4 development office.

5 What I did is to anybody that provided
6 funds, I provided them with some -- an annual update
7 on the kind of work we were doing.

8 Q. Okay. Do you get a salary from the --
9 from this program in pharmaceutical and health
10 economics?

11 A. I currently do, yes, because I'm emeritus,
12 and this is one of the sources of my current research
13 in the program along with, you know, grants made
14 directly to me.

15 Q. Right. So what -- what is your current
16 salary from the program in pharmaceuticals and health
17 economics?

18 A. It's \$5,000 a month.

19 Q. Okay. And then do you have a separate --
20 another salary that you get from Duke as your role of
21 professor emeritus?

22 A. Not except for pension funds.

23 Q. Okay. And has that been the case since
24 you became a professor emeritus in 2009?

25 A. Yes.

1 Q. So your money that you get paid from Duke
2 comes through this program in pharmaceuticals and
3 health economics?

4 A. Yes.

5 Q. Okay. And then you mentioned, I think, in
6 one of your last answers, that there were -- you
7 receive money from grants that are made directly to
8 you?

9 A. Well, I should clarify that. Not directly
10 to me, but to some researcher that -- you know, we
11 got a grant to study neglected diseases that came, I
12 think, through the public policy department that I
13 was part of. We've had grants from other government
14 sources that come to me -- that I'm one of the
15 principal investigators.

16 Q. Right. But the -- the grant money, does
17 it go to Duke to be used on the project, or does it
18 come like to you? I'm just trying to understand how
19 the money flows.

20 A. Flows through Duke or through Tufts or
21 through some generally academic institution.

22 Q. Okay. So if you look at your -- I was
23 going to do this a little later, but can we look at
24 your CV? I see you have a list -- I think it's on
25 page 16. There's a list of research grants and

1 government projects.

2 Is this -- does this contain all -- a
3 description of all the grants that have -- have come
4 through you to Duke University? Or are there some
5 missing?

6 MR. MORRIS: Objection to form.

7 THE WITNESS: I think it would include all
8 the grants to Duke or through Duke, yes.

9 BY MS. SUTTON:

10 Q. Okay. It would -- this would not include
11 the grants, though, that went through Tufts, that you
12 mentioned earlier?

13 A. Well, I may have misspoke. I used Tufts
14 as an example. I don't recall specifically a grant
15 from Tufts. I work collaboratively with Tufts.

16 Q. Yeah, you -- you work collaboratively with
17 Joe DiMasi, right?

18 A. Yes.

19 Q. And he's at Tufts, correct?

20 A. Right.

21 Q. And then so he probably receives grants
22 from Tufts for his work where you collaborate? Am I
23 characterizing that correct?

24 A. Yes.

25 Q. Okay. So just looking at these research

1 grants, I see that you have dollar amounts for the
2 grants listed at the first grant, second, third, and
3 then skip down to the sixth. And those seem to be
4 grants that you received from the National Science
5 Foundation, correct?

6 MR. MORRIS: Objection to form.

7 THE WITNESS: They were grants from the
8 National Foundation to Duke University for
9 various projects.

10 BY MS. SUTTON:

11 Q. Is there a reason you don't put dollar
12 amounts for the -- for the size of the grants for
13 the -- the remainder that are listed here?

14 A. I think those were the -- what I would
15 call the major grants, particularly the ones starting
16 the second through the fourth, and most of the others
17 would be much smaller amounts.

18 Q. Okay. So I just want to turn briefly
19 to -- to another topic. In your expert report, I
20 think at paragraph 6, it says that you were retained
21 on behalf -- you were retained for this case on
22 behalf of Endo Pharmaceuticals, Endo Health
23 Solutions, as well as Par Pharmaceutical companies,
24 correct?

25 A. Yes.

1 Q. Okay. So are you working for any other of
2 the defendants in the opioid litigation in this case?

3 A. No.

4 Q. Okay. Who first contacted you about
5 becoming an expert in this case?

6 A. I think first I had a conversation with
7 Cornerstone saying there was interest in exploring
8 whether I was open -- you know, available, and
9 interested in being an expert in the case. And that
10 was Greg Eastman and some colleagues at Cornerstone.
11 And I said I would be interested in discussing it.

12 And then subsequent to that, I had a
13 conversation with Steve Lonergan from Arnold & Porter
14 about the case and about a potential -- my potential
15 role.

16 Q. Was it your understanding that Steve
17 Lonergan had reached out to Cornerstone about getting
18 an -- getting an expert involved in this case on
19 behalf of Endo and Par?

20 A. I don't know for sure. It may be the
21 case.

22 Q. I'm just trying to understand if you know
23 how -- why Cornerstone reached out to you. What
24 prompted them to do that?

25 A. I have worked with Cornerstone on many

1 pharmaceutically related projects. Many of the list
2 of testimony were done in -- with Cornerstone doing
3 support. So it's possible that they recommended me
4 to Arnold & Porter, or suggested that I had a strong
5 knowledge of the pharmaceutical industry, lots of
6 publications related to pharmaceuticals, and I had
7 some experience in doing litigation.

8 Q. So -- and Cornerstone lists on its website
9 a number of clients that are -- that include law
10 firms, right?

11 A. I haven't looked at their website, but
12 I'll take your word for it.

13 Q. But it's your understanding that law firms
14 come to Cornerstone to help them find experts for
15 cases, correct?

16 MR. MORRIS: Objection to form.

17 THE WITNESS: Among other things, that
18 they may have, you know, relationships with law
19 firms, yes.

20 BY MS. SUTTON:

21 Q. And had you -- had you worked with Steve
22 Lonergan in prior matters before this case?

23 A. No.

24 Q. Had you worked with the law firm Arnold &
25 Porter in prior litigation?

1 A. I think I may have, but I don't recall
2 specifically if I have.

3 Q. Do you recall whether you worked with
4 Arnold & Porter more than once?

5 A. I think if I did -- I would have to go
6 back and look at my records -- I -- you know, I
7 served on a board with an Arnold & Porter member,
8 and -- who is former general counsel at Arnold &
9 Porter. But I don't recall any specific litigation.
10 I -- I remember being on a board with him.

11 Q. Well, maybe a little later we'll go
12 through some of the cases, and it might spark your
13 memory if you had worked with Arnold & Porter in the
14 past.

15 So you said that Cornerstone reached out
16 to you first. Do you remember when that contact
17 occurred?

18 A. It was kind of last summer, I think, the
19 summer of 2018.

20 Q. Okay. What was your understanding of
21 the -- of the assignment that you had been given to
22 look into in this case?

23 A. Well, it was initially a consulting
24 assignment that -- there was litigation, as -- as I
25 indicated here, that related to Cuyahoga and Summit

1 County against manufacturers, distributors, and
2 pharmacies, and that there was an allegation that
3 massive false marketing had drastically expanded the
4 market, and that there was, you know, likely to be
5 expert reports by economists from plaintiffs that I
6 might rebut, depending on their nature, as well as,
7 given my research in the pharmaceutical industry, I
8 could explain the complexities and the dynamic nature
9 of the pharmaceutical industry as it relates to this
10 litigation.

11 Q. So at the time you were retained, in the
12 summer of 2018, you had not seen any expert reports
13 had been provided by the Plaintiffs yet?

14 A. That's correct.

15 Q. Were you given any assumptions from which
16 you were to write your report?

17 A. No.

18 Q. Okay. You mentioned the Summit and
19 Cuyahoga County cases; and is it your understanding
20 that those are the first cases that are slotted to go
21 to trial in the multidistrict litigation?

22 A. Yes.

23 Q. Okay. Have you been retained as an expert
24 in -- in any of the other cases that are filed in the
25 MDL?

1 A. No.

2 Q. Have you been retained as an expert in any
3 other opioid case falling outside the multidistrict
4 litigation?

5 A. No.

6 Q. Okay. So it's your understanding that
7 you're only providing testimony in the Cuyahoga and
8 Summit County case?

9 MR. MORRIS: Objection to form.

10 THE WITNESS: Yes, related to my
11 assignment here that I have provided testimony
12 today related to that, yes.

13 BY MS. SUTTON:

14 Q. Okay. Have you met with or had any
15 discussions or e-mail exchanges with any individuals
16 that have been designated as expert witnesses in this
17 case?

18 A. No.

19 Q. Okay. Do you know Minnie Baylor-Henry?

20 A. No.

21 Q. Never had any meetings or e-mails with her
22 about this case?

23 A. Not to my memory, no.

24 Q. Okay. Do you know Jon Fryzek?

25 A. No.

1 Q. So you've never had any discussions or
2 e-mails with him?

3 A. That's correct.

4 Q. Okay. Richard La Magna?

5 A. No.

6 Q. Okay. Same questions with respect to
7 Justin McCrary.

8 A. No, I've not had any e-mails or
9 discussions.

10 Q. Do you know him? He's at Columbia
11 University.

12 A. No, I do not know him. I've heard of him,
13 but I don't know him personally.

14 Q. Okay. Sean Patterson?

15 A. No.

16 Q. Have you heard of him?

17 A. No.

18 Q. Okay. Have you had any discussions or
19 e-mails about this case with Robert Young, Dr. Robert
20 Young?

21 A. No.

22 Q. Do you know of him?

23 A. No.

24 Q. Have you had any meetings, discussions, or
25 e-mails with Mark Murtha?

1 A. No.

2 Q. Do you know Mark Murtha?

3 A. No.

4 Q. Okay. Have you had any e-mails, meetings
5 or discussions with Dr. Doug Tucker?

6 A. No.

7 Q. Do you know Dr. Doug Tucker?

8 A. No.

9 Q. Have you had any e-mails, discussions, or
10 meetings with a Dr. Robert Lyerla at Western Michigan
11 University?

12 A. No.

13 Q. Do you know -- do you know him?

14 A. No.

15 Q. Have you had any e-mails, meetings, or
16 discussions with a Dr. Bruce Michael Bagley at the
17 University of Miami?

18 A. No.

19 Q. Okay. Do you know him?

20 A. No.

21 Q. All right. Thank you.

22 Do you plan to testify at the Summit and
23 Cuyahoga trial in October?

24 A. If I'm asked to testify, I will. You
25 know.

1 Q. Have you been -- have you been asked?

2 A. Not to this point, no.

3 Q. Do you have it blocked out on your
4 calendar?

5 A. I have it blocked out, yes.

6 Q. Okay. Besides the attorneys at Arnold &
7 Porter, have you been in touch with any other lawyers
8 about your expert work in this case?

9 A. No.

10 Q. Do -- if -- if you testify at trial, do
11 you plan to use any demonstratives?

12 MR. MORRIS: Objection to form.

13 THE WITNESS: Quite possibly, yes.

14 BY MS. SUTTON:

15 Q. Okay. Have those demonstratives been
16 made?

17 A. No.

18 Q. Would you make them, or would someone else
19 do it?

20 A. They would be made under my direction by
21 someone who does software.

22 Q. Okay. Would -- would those folks be at
23 Cornerstone?

24 A. Cornerstone or another related
25 technological company.

1 Q. So turning back to your expert report, I
2 wanted to turn to Appendix 3, which you have titled
3 "Materials Considered."

4 Did you put together Appendix 3, or did
5 someone else do that for you?

6 A. It was put together under my direction. I
7 didn't type it out, but I -- this is -- I indicated
8 to Cornerstone to put down all of the material that
9 we had considered in the report, including all of the
10 references.

11 Q. Okay. So this Appendix 3 was created by
12 Cornerstone?

13 MR. MORRIS: Objection to form.

14 THE WITNESS: Well, I wouldn't
15 characterize it that way. I -- I created it.
16 They did the actual typing of it, but it was
17 created under my direction.

18 BY MS. SUTTON:

19 Q. Did Cornerstone keep track of, along the
20 way, all the materials that you were considering for
21 your expert report?

22 A. They -- you know. Yes, I would say they
23 kept track of materials, but I initiated much of
24 the -- the documents to look at.

25 Q. Okay. So -- so is this Appendix 3, is

1 this a full and complete listing of every document
2 you have reviewed and considered in preparing your
3 report?

4 MR. MORRIS: Objection. Form.

5 THE WITNESS: It looks to be a complete
6 documentation of materials considered. Of
7 course, I rely also on my 50-years-plus of doing
8 research in economics of the pharmaceutical
9 industry.

10 BY MS. SUTTON

11 Q. Is there anything you would want to add as
12 you sit here today?

13 A. No.

14 Q. Let's take a look at first -- the first
15 section of materials considered, which are the
16 academic articles.

17 I counted this up, and it looked like that
18 there were 38 articles. You would agree that there
19 are more than 38 academic articles on the
20 relationship between the promotion and sale of
21 pharmaceuticals, wouldn't you?

22 A. Yes.

23 Q. So how did you go about selecting -- well,
24 first, did Cornerstone find any of these 38 articles
25 for you?

1 A. A few, you know. I -- I gave them the
2 articles that I thought were most relevant from my
3 experience, and then I asked them to see if there
4 were any other references that were in the literature
5 that seemed relevant to the report at hand.

6 Q. Can you identify the articles that you
7 provided to Cornerstone?

8 A. Not off -- most of these were ones that I
9 mentioned, but I -- you know, I -- I don't have a
10 memory of which ones they followed up on or suggested
11 I look at.

12 Q. So what kind of instructions did you give
13 Cornerstone with respect to adding to this list of
14 academic articles beyond what you provided them?

15 A. I said there is a -- a literature here on
16 the effects of promotion. And particularly, you
17 know, I -- I have done work in this area, so I know
18 the literature well. But for instance, Dr. Rosenthal
19 has found a negative depreciation rate, which I said
20 I never have seen this in my professional experience.
21 And she claims it's due to -- it can be explained by
22 the fact that opioids are addictive, but there are
23 other work on addictive substances, marketing of
24 addictive substances, like cigarettes and alcohol,
25 that has been undertaken, some by me and some by

1 others. And I want you to see if I'm right, that
2 there -- that you can find anything in the literature
3 that has a negative depreciation rate.

4 And in the context of that, they looked at
5 stuff -- some more articles. They searched the
6 literature diligently, but they could not find
7 anything.

8 Q. And when you say "they," you're referring
9 to Cornerstone?

10 A. Yes, the team at Cornerstone.

11 Q. Did you conduct any of your own searches
12 of the medical literature?

13 A. Of this literature, yes.

14 Q. Oh. And when did you do that?

15 A. Started when -- back in -- when I was
16 first retained, and it continued through when I
17 submitted my report.

18 Q. So you did searches, and you also asked
19 Cornerstone to do searches?

20 A. Yes. They're another set of eyes.

21 Q. And so this list of academic articles
22 reflects both articles you found and articles that
23 Cornerstone found?

24 A. Yes. Primarily that I found or knew
25 about, and a few that they added to, had me look at.

1 Q. Now, you're aware that Dr. Rosenthal has
2 published in the area of promotion and the sale of
3 pharmaceutical products, correct?

4 A. Yes.

5 Q. And in fact you have cited to her in some
6 of your academic research, correct?

7 A. Yes.

8 Q. Okay. So when you would receive
9 materials -- oh, one other question. With respect to
10 these academic articles, or actually any of the other
11 things that are listed in Appendix 3, were -- were
12 any of these items provided to you by the attorneys?

13 A. No.

14 Q. Okay. So when you would receive materials
15 from Cornerstone, how would they send it to you?
16 Electronic or hard copy?

17 A. Electronic, usually.

18 Q. Like a PDF?

19 A. Yes.

20 Q. Okay. Do you keep a file for this case in
21 your office, or in your home?

22 MR. MORRIS: Objection to form.

23 THE WITNESS: No, not really.

24 BY MS. SUTTON:

25 Q. Okay. How do you organize the materials

1 that you considered for your report?

2 A. You know, they're all available pretty
3 much online, so I looked online at a lot of them. So
4 a lot of them were not literally a PDF. There may
5 have been a few like that, that I wanted us -- them
6 to produce, but I -- I have access to Medline through
7 Duke University, so I can pull up an article and look
8 at it.

9 Q. Okay. Now, in this case, you're
10 testifying on behalf of Endo or Par, correct?

11 A. Yes.

12 Q. All right. And how many Endo and Par --
13 strike that.

14 Endo and Par produced documents in this
15 litigation as part of the discovery process; are you
16 aware of that?

17 A. Yes.

18 Q. And I -- looking at your "Materials
19 Considered" list, under "Produced Documents," it
20 looks like you looked at three documents that were
21 produced by Endo. Is that correct?

22 A. Yes.

23 Q. Did you -- did you review any more than
24 the three documents that are described here?

25 A. No.

1 Q. Were you given access to the Endo and Par
2 document productions that were made in the opioid
3 litigation?

4 A. Yes.

5 Q. And how were you given access?

6 A. In the sense that we went through a
7 process where -- you know, initially I wasn't --
8 initially the scope of my participation was to
9 characterize the pharmaceutical industry and its
10 complexities, which I've done in the report, and to
11 await what would be produced by the economist on the
12 plaintiffs' side that I would -- could be asked to
13 rebut.

14 And so I asked Cornerstone to look at what
15 data was available that might be used either by the
16 plaintiffs or by us, and what documents internally
17 might be useful in this task. So they screened some
18 documents, but then we received Rosenthal's report,
19 which was focused on statistical analysis between
20 marketing and opioid utilization, and that one became
21 my focus after receiving Rosenthal's report.

22 So I had all the documents I needed to do
23 my two main tasks, which were to characterize the
24 industry complexity and dynamic nature, and second,
25 to focus on the limitations of Rosenthal's analysis.

1 Q. Okay. So if I understand -- that was kind
2 of a long answer. If I understand it correctly, when
3 I had asked you, did you -- were you given access to
4 the millions of documents that Endo and Par produced
5 in discovery, and if I heard you right, I think you
6 were saying Cornerstone had that access?

7 A. Cornerstone and myself. But I -- I
8 delegated to Cornerstone to look through this
9 material to see if it was anything that was useful in
10 supporting my analysis of, you know, the way the
11 industry works. But I primarily relied on my own
12 experience and knowledge. And second of all,
13 depending on what we were going to be asked to do in
14 terms of a rebuttal, was there useful information.

15 So yes, they -- they were screening a lot
16 of the documents, looking through them, and I relied
17 on them to call to my attention anything that would
18 be supportive of my main assignment.

19 Q. So do you know how many of Endo and Par's
20 internal documents that Cornerstone would have looked
21 at?

22 A. No.

23 Q. And do you know how many Endo and Par
24 discovery documents you looked at? Is it just the
25 three that are listed here?

1 A. It's just the three here.

2 Q. Okay. Did you ever perform any searches
3 of -- on any database that contained Endo and Par
4 internal documents?

5 A. No.

6 Q. Do you know if Cornerstone did?

7 A. I think they made -- I think they may have
8 looked at what documents -- what data might -- data
9 exists, both externally and internally, that might
10 support a statistical analysis by the plaintiffs or
11 in rebuttal to the plaintiffs economics analysis.

12 Q. Did you ever ask them what Cornerstone
13 found when they looked at the Endo and Par documents?

14 A. We had some discussions of that, yes.

15 Q. And how would those discussions occur?

16 A. Well, I would ask, is there claims data
17 available? Is there data about potentially marketing
18 contacts in Cuyahoga and Summit County? Is there
19 data on prescriptions in those counties? What
20 information, either external or internal, is
21 available that would -- could shed light on issues of
22 marketing and sales in a -- at a county level?

23 Q. So would you have those discussions via
24 e-mail, or over the phone? Can you just tell me
25 how -- what format they took?

1 A. Over the phone.

2 Q. Okay. And did -- did Cornerstone point
3 you to any internal documents that spoke to the
4 subject you just described?

5 A. No, I think basically they said there's
6 not any information that would provide a basis for a
7 statistical analysis.

8 Q. Did you have -- did you review any
9 documents that were produced by the Plaintiffs,
10 Cuyahoga and Summit County, in this case?

11 A. I don't recall doing so.

12 Q. Do you know if you had access to the
13 documents that were produced by the plaintiffs in
14 this case?

15 A. What I did is I reviewed any references
16 that I felt were important to review in Rosenthal. I
17 don't know that she cited any government documents.

18 Q. And when you say "government documents,"
19 documents produced by Cuyahoga and Summit County?

20 A. That's what I understood your query, yes.

21 Q. Just wanted to make sure we were using the
22 same terminology.

23 Did you review any internal documents
24 produced in discovery by any of the other defendants
25 in this case?

1 A. Not to my knowledge, no.

2 Q. Do you know if Cornerstone reviewed any
3 documents produced by other defendants in this
4 litigation?

5 A. I don't believe they did.

6 Q. Do you know if Cornerstone is working with
7 any other experts in this case?

8 A. I understand they are, but they're not --
9 there's not an interchange of information.

10 Q. What do you mean by "there's not an
11 interchange of information"?

12 A. Well, my understanding is there are
13 separate teams working for separate defendants, and
14 those teams have not shared information prior to the
15 expert reports that came from the different
16 defendants. I think there was no communication of --
17 as I understand it, about analysis or data or
18 anything prior to the reports that came out.

19 Q. Okay. And what other -- do you know what
20 other experts in this litigation that Cornerstone is
21 working with, who they are?

22 A. My understanding is they include Sean
23 Nicholson and Ian Coburn. Those are the only two I
24 know about.

25 Q. And those experts were retained by other

1 defendants in this litigation?

2 A. That's my understanding.

3 Q. And have you now had an opportunity to
4 review the results of Sean Nicholson and Ian Coburn's
5 work?

6 A. No.

7 Q. Appendix 3 also said that you reviewed the
8 depositions of two plaintiffs' experts, Dr. Rosenthal
9 and Dr. McGuire. Why did you choose to review the
10 depositions of those two experts?

11 A. Well, Dr. Rosenthal was --

12 Q. Or -- excuse me. I'll ask that
13 differently. Strike that. We know why you did it,
14 so I'll simplify that.

15 Why did you chose to review the deposition
16 of Thomas McGuire and not any other plaintiffs'
17 experts besides McGuire and Rosenthal?

18 A. There was a reference in Dr. McGuire's
19 deposition to formularies. He was asked some
20 questions on formularies, and he said that
21 formularies do affect which drugs are selected to use
22 for patients. And it was a useful thing to quote in
23 my report.

24 Q. But you did not review the depositions of
25 any other plaintiffs' experts beyond Rosenthal and

1 McGuire, correct?

2 A. Yes.

3 Q. And you didn't review the depositions of
4 any of the defense witnesses that were taken in this
5 case, did you?

6 A. That's correct.

7 Q. And you didn't review the depositions of
8 any of the plaintiff witnesses that were taken in
9 this case, correct?

10 A. Yes.

11 Q. Did you review the exhibits to
12 Dr. Rosenthal's deposition?

13 A. Yes, I did.

14 Q. And did you review the exhibits to the
15 deposition of Dr. McGuire?

16 A. Oh, to the deposition. I was initially
17 thinking about his report -- her report.

18 I don't know that I saw the exhibits. I
19 don't think they were provided in the document that I
20 reviewed.

21 Q. Okay. Are you aware of whether any of the
22 manufacturing defendants conducted any internal
23 studies or possess any data on the effects of
24 promotion on sales?

25 MR. MORRIS: Objection to form. I'll

1 instruct the witness not to answer, to the
2 extent that any information you may have comes
3 from counsel.

4 THE WITNESS: Other than what's
5 confidential, I -- I don't have any knowledge.

6 BY MS. SUTTON:

7 Q. When you say "confidential," you're
8 referring to communications with counsel?

9 A. Yes, although -- could I hear the question
10 again?

11 Q. Well, maybe I can rephrase it.

12 Did you ever ask whether or not any of the
13 manufacturing defendants had -- had any internal
14 studies or any data on the effects of promotion on
15 sales?

16 A. No, I never asked that question.

17 Q. Okay. Have you ever heard of something
18 called "call notes"?

19 A. Yes.

20 Q. And isn't it true that call notes describe
21 interactions between pharmaceutical drug sales
22 representatives and prescribers?

23 A. Yes, they're like contacts, but they often
24 can be very brief in their notation.

25 Q. Right. But they do document to some

1 extent the interactions that the sales reps have with
2 prescribing physicians, correct?

3 A. Yes, some firms have them historically.
4 Some firms don't have -- they're very limited in what
5 they have.

6 Q. Okay. And did you review any call notes
7 in this case?

8 A. No.

9 Q. Did you ask to see any of the call notes
10 that have been produced in this case?

11 A. No.

12 Q. I was going to go to another topic. I
13 don't know if you want to take a break or keep going.

14 MR. MORRIS: I guess we can take a quick
15 break, just to stretch the legs and . . .

16 THE WITNESS: Yeah. We can use the
17 restroom. Thank you.

18 VIDEOGRAPHER: Going off the record. The
19 time is 10:34 a.m.

20 (A recess transpired from 10:34 a.m. until
21 10:43 a.m.)

22 VIDEOGRAPHER: Going back on the record.
23 The time is 10:43 a.m.

24 BY MS. SUTTON:

25 Q. Professor Grabowski, I just wanted to

1 change topics and -- and talk about some -- some of
2 your areas of academic interest. I've read a lot of
3 your -- your papers and a lot of your expert reports,
4 so I feel like I'm starting to get kind of a better
5 handle on -- on what some of your views on topics
6 are. But I just wanted to ask you a few questions.

7 Is it -- is it your opinion that branded
8 pharmaceutical companies need more patent protection
9 in order to award innovation?

10 MR. MORRIS: Objection to form.

11 THE WITNESS: I'm not sure what you mean
12 by "more." The amount of protection varies.

13 And it can be very short, or it can be longer.

14 We found on average it's 12 years.

15 BY MS. SUTTON:

16 Q. Do you think 12 years is an adequate
17 amount of time for patent protection in order to
18 reward innovation?

19 A. Well, that also can vary, but as an
20 average, it's -- you know, some of the seminal work
21 by Nordhaus, who won the Nobel Prize in economics,
22 but some of his seminal work was on exclusivity, and
23 found that it could be longer to get -- promote
24 social welfare for innovation. But in
25 pharmaceuticals, I think a very short exclusivity

1 period, like the five years, would generally -- a
2 five years' exclusivity under Hatch-Waxman would be
3 insufficient for many important innovations. Twelve
4 years is generally sufficient in most cases.

5 Q. Okay. But five years, in your view, is
6 too short to reward innovation?

7 A. For most innovations, yes.

8 Q. Okay.

9 A. In pharmaceuticals.

10 Q. And I know you've testified in both
11 Congress and -- and court proceedings in patent --
12 about the patent laws in -- in patent cases. Do you
13 have any disagreement with the patent laws as they
14 are now written?

15 MR. MORRIS: Objection to form.

16 THE WITNESS: Well, laws can always be
17 improved, but I haven't specifically advocated
18 any particular reforms.

19 BY MS. SUTTON

20 Q. Okay. So there is nothing, as you sit
21 here today, that you would advocate should be changed
22 about the patent system?

23 A. Well, I think it could be harmonized. I
24 think I've indicated harmonization globally, and, you
25 know, the -- the Hatch-Waxman exclusivity is

1 different from biologics and new chemical entities,
2 and that could be harmonized. I think otherwise you
3 create more incentives for one type of innovation
4 compared to another.

5 Q. And you have -- you've been involved in a
6 lot of litigation involving branded pharmaceutical
7 companies versus generic drug manufacturers, correct?

8 A. That's correct.

9 Q. And in those cases, is it fair to say that
10 you've generally testified on behalf of the branded
11 drug company?

12 A. Generally, yes.

13 Q. Have you ever testified in one of those
14 cases on behalf of a generic?

15 A. Yes, I've testified on behalf of a patent
16 challenger.

17 Q. Okay. But that was just one time that you
18 recall?

19 A. One time testifying. Other times I've
20 been retained and the cases have been settled.

21 Q. Do you have a view on whether or not
22 generic drugs undermine branded pharmaceutical
23 company revenue?

24 MR. MORRIS: Objection to form.

25 THE WITNESS: Well, I wouldn't phrase it

1 that way. I think both branded and generic
2 serve very useful social welfare functions.
3 Branded companies provide discovery of new
4 products, and generics provide intensive price
5 competition after patents and exclusivities
6 expire. And they're both very important social
7 welfare functions.

8 BY MS. SUTTON:

9 Q. But after exclusivity has expired and the
10 generic product launches on the market, you would
11 agree that that has a negative impact on the branded
12 pharmaceutical company's profits?

13 A. Generally that's the case, yes. And
14 sometimes the product has eroded for other reasons;
15 you know, competition from other brands, et cetera.

16 Q. But profits can also be eroded by the
17 introduction of the generic, correct?

18 A. Sure.

19 Q. Are you named on any patents?

20 A. No.

21 Q. Okay. Have you ever -- well, let's talk
22 about the past. Have you ever owned stock in a
23 pharmaceutical company?

24 A. Mainly through mutual funds. But I have
25 owned some stock in pharmaceutical companies.

1 Q. Yes. So setting aside your mutual funds,
2 what companies have you owned stock in,
3 pharmaceutical companies -- strike that. I'll start
4 over.

5 Setting aside your mutual funds, what
6 pharmaceutical companies have you owned stock in in
7 the past?

8 A. Well, I have some small amounts in Merck
9 and J&J that I inherited from my mother. I guess
10 those are stocks for widows and orphans. And so I
11 still retain, you know, a few hundred shares of
12 those, not an appreciable amount.

13 I have owned some stock in some of the
14 younger companies, like Regeneron Pharmaceuticals. I
15 was a -- on the board of Triangle Pharmaceuticals, a
16 local company here that developed AIDS products, and
17 so I had stock in Triangle Pharmaceutical, which was
18 acquired by Gilead, and so for a while I had stock
19 options at Gilead. But I donated much of that to
20 Duke University.

21 Q. You mentioned Regeneron. Do you still
22 hold ownership in Regeneron shares?

23 A. Small amounts, yes.

24 Q. Do you know how many shares you own?

25 A. I think I own 25 shares, or -- no, it's

1 250 shares, I think.

2 Q. Okay. I think I've seen in prior
3 testimony that you have owned stock in Pfizer?

4 A. Yes, in the past.

5 Q. In the past. Do you -- do you remember
6 how many shares of Pfizer stock you owned?

7 A. Not an appreciable amount, for terms of
8 anyone's portfolio, you know. Maybe several hundred
9 shares.

10 Q. Any other stock holdings in pharmaceutical
11 companies that you can recall besides the ones you've
12 mentioned?

13 A. I've owned shares in Mylan Corporation.
14 Those are the ones I think I would
15 remember.

16 Q. Okay. So do you remember -- do you
17 currently hold stock ownership in Mylan?

18 A. Yes.

19 Q. And how many shares do you own?

20 A. Maybe a couple hundred.

21 Q. And you mentioned Gilead stock options.
22 Did you receive those stock options as part of the --
23 Triangle being acquired by Gilead?

24 A. Yes.

25 Q. And you said --

1 A. Well, I had the options, and they rolled
2 over to Gilead.

3 Q. Okay. All right. So you had stock
4 options in Triangle that rolled over into Gilead upon
5 the purchase of Triangle?

6 A. Yes.

7 Q. Okay. Do you know what the value of those
8 stock options was?

9 A. Well, at the time I donated the Gilead
10 shares to Duke University, they were over \$100,000.

11 Q. Did you -- prior to donating them to Duke,
12 did you exercise any of those stock options?

13 A. No, I didn't exercise them. I -- you
14 know, I took the -- I rolled them over completely to
15 Gilead because I thought it was a good company to
16 invest in.

17 Q. And then after they rolled over to Gilead,
18 did you exercise on your own behalf any of the stock
19 options?

20 A. Yes, at some point I exercised them, and
21 then I donated them.

22 Q. Okay. So after you exercised them, you
23 donated all the proceeds to Duke?

24 A. Yes.

25 Q. Okay. Later on we're going to talk about

1 the cases where you've testified as an expert on
2 behalf of a pharmaceutical company. But have you
3 ever consulted for a pharmaceutical company where --
4 outside of your expert work?

5 A. Yes.

6 Q. And how many times have -- have you
7 engaged in such consulting with a pharmaceutical
8 company?

9 A. Over, you know, 50 years, maybe ten or
10 twelve times.

11 Q. And do you recall which pharmaceutical
12 companies you've consulted with?

13 A. To some degree, yes.

14 Q. If you could list as many as you recall,
15 that would be great.

16 MR. MORRIS: Are you asking about
17 consulting where he's been revealed as a
18 consultant, so like he's done something, even if
19 it's not litigation? Or are you talking about
20 consulting where it's for potential litigation,
21 but not disclosed?

22 I just want to know because I will have an
23 objection.

24 BY MS. SUTTON:

25 Q. Right. Let's talk about consulting

1 outside the context of litigation.

2 A. Right. But some of those would be
3 confidential in nature.

4 Q. Okay. So let's just start over, with the
5 caveat, my questions now are going to be about how
6 many -- the consulting that you have done with
7 pharmaceutical companies outside of your expert work
8 or outside of litigation.

9 So you have acted as a consultant to the
10 pharmaceutical industry in the past, outside of your
11 work in litigation or as an expert?

12 A. Yes.

13 Q. Okay. And you mentioned earlier, 10 or
14 12 times. Is that how many times you would
15 approximate that has occurred?

16 A. Yes, over a -- a really long time span.

17 Q. And you mentioned that some of these
18 projects were confidential. Are there any names of
19 the pharmaceutical companies you were consulting with
20 that you could tell us today that aren't
21 confidential?

22 A. You know, I think in some publications I
23 have enumerated a consulting relationship, in that it
24 I think would include Pfizer. Where -- where it's
25 led to a publication, I would generally indicate that

1 funds were provided by a particular company.

2 Q. So sometimes you would consult, like for
3 instance Pfizer, on a project that then would turn
4 into a publication?

5 A. Yes.

6 Q. And then in -- in that publication you
7 would disclose that you received funds from Pfizer?

8 A. Right. And I would do that if -- if
9 Pfizer made a grant to Duke for a contract, and I
10 would reveal that as well.

11 Q. Okay. And can you name any other
12 companies besides Pfizer that you consulted with?

13 A. In terms of leading to a publication? I
14 think Genentech.

15 Q. Anyone else?

16 A. Those are the ones I could recall right
17 now.

18 Q. Do you -- have you ever consulted with a
19 pharmaceutical company on a project that didn't
20 result in a published paper, setting aside
21 litigation?

22 MR. MORRIS: Yeah.

23 THE WITNESS: Yes. I mean, sometimes it
24 is a strategic -- it's a consultant consulting
25 about things like strategies for research

1 allocation or strategies involving competitive
2 issues.

3 BY MS. SUTTON:

4 Q. In that type of work, what is your hourly
5 rate that you generally charge?

6 A. It can be less. It can be similar. I
7 mean, often those projects are on a dollar contract,
8 like there is a budget of so many -- so much money
9 involved.

10 Q. So when you said it can be less or more,
11 less or more than your \$800 hourly rate?

12 A. You know, I -- it's not negotiated as an
13 hourly rate, usually. Sometimes it is. But, you
14 know, more often it's -- you know, there is a budget
15 of \$10,000 that I've agreed to do this project.

16 Another company is -- that I did work on
17 blood products was Grifols, and it -- it had a
18 similar kind of a budget of that kind.

19 Q. A budget of \$10,000?

20 A. No, a budget -- I don't know what the
21 budget was, but it would be a fixed budget or --
22 Grifols, I think I may have gotten my hourly rate up
23 to some cap, so I got \$800 an hour to -- to work on
24 an interdisciplinary project that resulted in a few
25 publications on -- Grifols does blood products. They

1 extract proteins from blood, and there were issues
2 surrounding, you know, the ethics and economics of
3 paying for donors. Some countries allow that, like
4 the U.S. and Germany. Some don't.

5 So we had a project team of ethicists, of
6 economists, of medical doctors. And we worked -- I
7 think I agreed to work for \$800 an hour, subject to
8 an outer cap. But I don't -- I don't think I ever
9 reached the outer cap.

10 Q. Do you recall how much with this project
11 you ultimately were paid?

12 A. No, I don't. I'd have to review my
13 invoices.

14 Q. Okay. Is it possible for you to
15 approximate how much you've been paid working as a
16 consultant for the pharmaceutical industry outside of
17 the litigation work you've done?

18 A. Not without looking at records, but I
19 would say it's not a huge amount.

20 Q. And what do you mean by "not a huge
21 amount"?

22 A. It's not hundreds of thousands of dollars.

23 Q. Is it \$100,000?

24 A. It might be, over 40 years, yes.

25 Q. Okay. You'd have to go back and look at

1 your records to figure -- figure that out?

2 A. Yes.

3 Q. Okay. I've also seen in some of your
4 testimony a reference to you being an advisor on
5 strategic issues for drug companies. Do you recall
6 giving testimony where you said that you were an
7 advisor on strategic issues?

8 A. Yes, that was what I was just enumerating.

9 Q. Okay.

10 A. Like research allocation, or issues of
11 competition.

12 Q. Okay. Did you give strategic advice to
13 Merck?

14 A. I gave a talk to Merck about work. I
15 think Merck supported some work that we did many,
16 many years ago. Maybe more than 20 years ago.

17 Q. So you gave a speech, or . . .

18 A. Well, I had a -- some project funds from
19 Merck. I think they went through the program. And
20 then I was asked to just present it. I wasn't paid
21 for the speech.

22 Q. Okay. So how did the -- how were the
23 funds that Merck provided, how were they used for
24 this particular strategic issue that you consulted
25 on, if they weren't paid to you?

1 A. Well, I -- I think I'm confusing. There
2 was -- you know, I did a project through the program
3 which was -- resulted in one of my publications, my
4 initial work on returns to R&D and the distribution
5 of returns to R&D. And then I also may have done
6 some strategic, you know, as a sidebar, some
7 strategic work for Merck of a minor nature.

8 Q. Okay. So you've done -- sounds like
9 several projects, then, for Merck?

10 MR. MORRIS: Objection to form.

11 THE WITNESS: I wouldn't say "several."

12 I've done a few projects many, many years ago.

13 I haven't had any support from Merck in, I would
14 say, more than 20 years.

15 BY MS. SUTTON

16 Q. Do you know how much Merck paid to support
17 the few projects you described?

18 A. Not offhand, no.

19 Q. Okay. Did -- were you an advisor on
20 strategic issues for Pfizer?

21 A. Yes.

22 Q. And can you describe that, please.

23 A. That would be confidential in nature, but
24 it involved some sort of general competitive issues.

25 Q. Do you recall how much you were paid by

1 Pfizer for that work?

2 A. Maybe \$10,000.

3 Q. Any other work as an advisor on strategic
4 issues for Pfizer that you can recall?

5 A. No.

6 Q. Have you been an advisor on strategic
7 issues for Sandoz?

8 A. Yes.

9 Q. Can you describe that for me?

10 A. They had an advisory committee. I -- I
11 have worked on biosimilars. They're a major
12 biosimilar company, and they had a -- what I'd call
13 an advisory board that met a few times to help them
14 advise about strategies in the biosimilar space. And
15 I think I was paid like \$1,000 a day twice, something
16 like that, to be on this advisory board.

17 Q. Are you on that advisory board any longer?

18 A. It -- I think it's defunct. At least I
19 haven't been contacted in several years.

20 Q. Okay. Have you been an advisor on
21 strategic issues for Allergan?

22 A. Yes.

23 Q. Okay. Again, can you describe that,
24 please.

25 A. That was --

1 MR. MORRIS: Objection. I'll just caution
2 the witness to the extent that -- confidential
3 information, not to reveal that.

4 MS. SUTTON: We have a protective order,
5 Counsel.

6 MR. MORRIS: Well --

7 MS. SUTTON: I don't want him to violate
8 any confidentiality --

9 MR. MORRIS: Correct. He's got different
10 obligations, potentially.

11 THE WITNESS: I think it was confidential,
12 but in general, it was related to biosimilars
13 again. It was in the nature of biosimilar --
14 evolution of biosimilars which I had written on.

15 BY MS. SUTTON:

16 Q. And do you recall how much you were paid
17 by Allergan for being an advisor on that strategic
18 issue for them?

19 A. I think it was something like \$5,000.

20 Q. Okay. Any other times that you've been an
21 advisor on strategic issues to drug companies that we
22 haven't covered?

23 A. I think, similar to the biosimilars, I was
24 an advisor to Amgen.

25 Q. Do you recall what you received in

1 compensation from Amgen for that work?

2 A. Could have been about 10,000 for, you
3 know, various meetings and analysis.

4 Q. Okay. Any other companies that you can
5 recall where you've been an advisor on strategic
6 issues?

7 A. No.

8 Q. Okay. Have you ever been hired, either in
9 your own individual capacity or through a third
10 party, to conduct a study on behalf of a
11 pharmaceutical company?

12 MR. MORRIS: Objection to form. Are we
13 still outside of the context of retained, but
14 not disclosed or testifying experts, for
15 litigation?

16 MS. SUTTON: Well, he can answer yes or no
17 without it running afoul.

18 THE WITNESS: Well, if I understand the
19 question, I have been retained as part of an
20 academic group of colleagues to investigate
21 particular issues. But I had, you know, a -- it
22 was a -- in the form of being retained to look
23 at a particular issue, to research an issue, to
24 publish on it, and the outside third party had
25 no impact on it other than to say, you know,

1 "Please analyze" -- you know, I'll give an
2 example: "Please analyze the average
3 exclusivity of innovative drugs."

4 And that was commissioned by a
5 pharmaceutical research association.

6 Q. Was that PhRMA --

7 A. Yes.

8 Q. -- that commissioned that?

9 A. Yes.

10 Q. Okay. Have any other pharmaceutical
11 companies come to you to commission a study on their
12 behalf?

13 A. Well, I mentioned that if I did a study
14 like that, I would acknowledge it in my -- my
15 publications, so we could look through that.

16 You know, I think I have -- you know, I
17 have the acknowledged support from Pfizer at some
18 point.

19 Q. So there's another study that you
20 conducted on behalf of Pfizer?

21 A. I would have to look through -- you know,
22 it's in the distant past, but I -- but I think there
23 is some support from Pfizer to do economic analysis
24 that -- although I think that it really then threw
25 our program.

1 Q. Okay. And this earlier study that you
2 mentioned that went through the trade organization,
3 PhRMA, that they sponsor, is that one that you did in
4 conjunction with Tufts?

5 A. Tufts, Joe DiMasi was involved. And I
6 think Genia Long was involved.

7 Q. Okay. Maybe we'll look at that a little
8 later.

9 Have you, either directly or through a
10 third party, submitted a proposal to a pharmaceutical
11 company to conduct a study regarding the economic
12 impact of abuse-deterrent opioids?

13 A. No.

14 Q. Do you know if any third party ever
15 offered your services to Purdue to work on a study
16 related to the economic impact of abuse-deterrent
17 formulations of -- of prescription opioids?

18 A. I have no knowledge of that.

19 Q. Okay. Have you ever made any study
20 proposal to Purdue Pharma?

21 A. No.

22 Q. Have you ever been a key opinion leader
23 for any pharmaceutical company?

24 MR. MORRIS: Objection to form.

25 THE WITNESS: I don't think I could be

1 characterized that way. That's usually a
2 medical doctor.

3 BY MS. SUTTON:

4 Q. Right. Just asking.

5 So you've never been a -- what's
6 considered a key opinion leader for Purdue Pharma?

7 A. No.

8 Q. Okay. Have you ever considered the opioid
9 effect on hospital utilization, medical costs, worker
10 compensation costs, disability costs, absenteeism
11 costs, caregiver burdens, or criminal justice costs?

12 A. No.

13 Q. Turning to something -- I think it's on
14 your résumé -- the American Enterprise Institute.
15 You're familiar with that group, correct?

16 A. Yes.

17 Q. Okay. What would you call them? I always
18 think of them as like a conservative think tank; is
19 that you would -- how you would characterize them?

20 A. No. I -- I think they've been
21 characterized that way, but I think they're basically
22 a market-oriented group that deals with various
23 issues, sort of sponsors conferences and sponsors
24 publications.

25 Q. What's your association with the American

1 Enterprise Institute?

2 A. Over the years, they -- they were
3 interested in the economics of pharmaceuticals, so
4 they asked me to present at conferences that then
5 resulted in publications. I was on their advisory
6 board, but that is more of an honorary position than
7 anything active.

8 Q. Okay. So you -- you have given -- have
9 you given speeches at the American Enterprise
10 Institute?

11 A. I've -- I've talked about my research
12 there, yes. Similar to what I gave to Congress.

13 Q. Have they sponsored any of your research?

14 A. Not -- I wouldn't say they sponsored a
15 research project. They have sponsored a -- you know,
16 "Please write up a layman's understanding of your
17 research or a review of the literature on a
18 particular topic, and we will publish it." More
19 oriented to policymakers than the journals that you
20 normally publish.

21 Q. Right, right. So do they pay you for that
22 work?

23 A. I think they would like give you a \$2,000
24 honorarium, which means you're working at less than
25 minimum wage.

1 Q. Does the American Enterprise Institute
2 have like meetings that you would attend?

3 A. Yes, they -- you know, I think in my CV
4 I've indicated presentations at the American
5 Enterprise Institute. They would -- back when Bob
6 Helms was their economic director for health
7 economics and related issues, he would sponsor some
8 conferences where academics would present their
9 latest results, and there would be discussions and
10 critics, and they would publish this, and there are
11 three or four publications that reflect that.

12 Q. So a lot of the work at the American
13 Enterprise Institute is aimed at policymakers and
14 lawmakers?

15 A. Yeah, and the general public, and -- not
16 so much academics.

17 Q. Correct. Do you know how the American
18 Enterprise Institute obtains its funding?

19 A. I think they get it -- they have
20 endowments. They get it from different
21 organizations.

22 Q. Do you know if the American Enterprise
23 Institute receives funding from the pharmaceutical
24 industry?

25 A. I would assume so, from among other

1 sources.

2 Q. Are you aware of whether or not any
3 pharmaceutical company or pharmaceutical trade
4 organization has used your research or your academic
5 work to defend the price of drugs?

6 A. I'm not aware of it, no.

7 Q. Do you know whether or not any
8 pharmaceutical company or pharmaceutical trade
9 organization has used your academic work to prolong
10 patent protection for branded drugs? To argue for
11 prolonging patent protection for branded drugs?

12 A. I'm not specifically aware of that, no.

13 Q. Okay. Manhattan Institute, are you
14 familiar with them?

15 A. Yes.

16 Q. Do you have an association or affiliation
17 with the Manhattan Institute?

18 A. No.

19 Q. Okay. Were you ever on anything called
20 the Project FDA Committee?

21 A. It sounds vaguely familiar, but I don't
22 remember doing anything on such a committee. I may
23 have been approached about it, or they asked me to
24 review a few papers, but other than reviewing some
25 papers and not being paid for it, I don't think there

1 was any involvement.

2 Q. Okay. So you -- you remember reviewing a
3 few papers for the Manhattan institute?

4 A. Yeah, I remember being very critical of
5 these papers.

6 Q. Okay. Was it like -- it's not like peer
7 review? It was just papers that were sponsored by
8 the Manhattan Institute?

9 A. It was like peer review, but I think they
10 sponsored the work.

11 Q. Okay. All right. So do you have an
12 understanding what kind of organization Manhattan
13 Institute is?

14 A. Once again, they're very market,
15 libertarian kind of organization.

16 Q. Okay. I don't think you've disclosed that
17 on your CV. Is that because you don't have an
18 official position with them, or . . .

19 A. That's right. I have no official
20 position.

21 Q. Okay. But you -- you've done some work.
22 Did they pay you for the reviews of the papers that
23 you did?

24 A. No.

25 Q. Okay. Your expert report discloses that

1 you've been an advisor and a consultant to the
2 National Science Foundation. That's on your --
3 that's actually -- I'm sorry. It's in your expert
4 report, paragraph 4. I just want to talk a little
5 bit about what that work was.

6 A. Oh, the National Academy of Sciences?

7 Q. Yes, I'm sorry. National Academy of
8 Sciences Institute of Medicine. Is that -- is that
9 something that's different than the National Science
10 Foundation?

11 A. Yes. They're both branches of the
12 government, but the National Academy of Science
13 Institute is sort of like a branch of, you know, the
14 NIH.

15 Q. Okay. Are you aware of whether or not
16 Purdue Pharma or the Sackler family have given money
17 to the National Academy of Sciences Institute?

18 A. I have no knowledge one way or the other.

19 Q. Okay. What kind of topics have you
20 advised and consulted the National Academy of
21 Sciences Institute of Medicine on?

22 A. There's been a few projects here of --

23 Q. Are they listed in your résumé?

24 A. I think there is some . . .

25 So back on page 16? The first one

1 involved a National Academy of Science study of the
2 impact of government regulation on innovation, and
3 that occurred in the late 1970s. There was a concern
4 in the country that government regulation had
5 affected innovation, and the Carter administration,
6 through the NSF and through the National Academy,
7 asked them to examine this issue.

8 They put forth a committee of, you know,
9 former government officials and others, and I was
10 what was called a study rapporteur, which was to
11 investigate the academic literature and write a
12 report for this committee that I said was a sort of
13 blue ribbon committee, involved former high officials
14 like the Secretary of State, and other groups.

15 Q. So if I wanted to find out the topics
16 where you had acted as an advisor and consultant to
17 the National Academy of Science, I would be able to
18 find them by looking in your CV, correct?

19 A. Yes.

20 Q. Okay.

21 A. There's a second one, you know, the -- on
22 vaccine innovation, on the next page.

23 Q. All right. Your CV also says, in
24 paragraph 3, that you've testified several times
25 before U.S. Congress on pharmaceutical industry

1 issues, correct?

2 A. Yes.

3 Q. And when you say "several times," do you
4 know how many times you've testified?

5 A. I think it's six times, when I counted
6 last.

7 Q. Okay. And each -- in any of the six times
8 that you testified, were you testifying on behalf of
9 any organization or company?

10 A. No. I was testifying on my research.

11 Q. Okay. Were you representing Duke as part
12 of that, or were you just representing your own
13 research?

14 A. I would say, you know, they were
15 interested -- I had worked on issues related to
16 legislation, and I was -- a staff member called me
17 up. I wouldn't say I was representing Duke. I was
18 reporting on my research to Congress.

19 Q. Okay. So in each of the six times that
20 you were -- and maybe we'll have to go one by one,
21 but each of the six times you were called to testify,
22 how were you contacted? How did it come about that
23 you testified?

24 A. By a staff member for the relevant
25 committee saying "We're having hearings on a

1 particular topic, like the Hatch-Waxman Act, or
2 litigation about patent life prior to the
3 Hatch-Waxman Act, and I understand you've worked on
4 this issue, and we would like you to be on the
5 academic panel, which would other include other
6 economists."

7 Q. So you never testified on behalf of a
8 pharmaceutical company before Congress?

9 A. No.

10 Q. Okay. When you testified before Congress,
11 you're doing that work voluntarily? There's no --
12 you're not getting paid, correct?

13 A. In the early days, they paid for your
14 expenses; but recently I've had to pay for my own, or
15 like Duke will pay for them.

16 Q. Right. It would -- before, they would pay
17 for your hotel or airfare?

18 A. Yes.

19 Q. No more, huh?

20 A. That's correct. That's government
21 constraints.

22 Q. Okay. So have you ever -- have you heard
23 of an organization called contract research
24 organizations?

25 A. CROs?

1 Q. Yes.

2 A. Yes.

3 Q. Yeah. Have you ever been retained on
4 behalf of a CRO?

5 A. No, I don't think so.

6 Q. Has a CRO ever came to you with a -- with
7 a paper or a study that they wanted you to publish?

8 A. No.

9 Q. Okay. We've talked a little bit about
10 Triangle Pharmaceuticals, a local -- a local company.
11 Was it -- would you call it a startup, or -- from
12 here?

13 A. Yes, it was a startup.

14 Q. Okay. And when did you first get involved
15 with Triangle Pharmaceuticals?

16 A. Dr. Dave Barry, who was -- who was at
17 Wellcome, who was one of the signature researchers
18 that invented the first AIDS drug, and he left
19 Wellcome -- Wellcome was a pioneer in AIDS research
20 and drugs -- and he formed Triangle. And I knew him
21 from his days at Wellcome. And when he founded
22 Triangle, at least not initially, but after a -- a
23 few years, he asked me to be on the board.

24 Q. Do you recall when that was?

25 A. It was the end of the '90s.

1 Q. Okay. So you served on the board of
2 directors?

3 A. Yes.

4 Q. Was it a publicly held company?

5 A. Initially it was privately, but I think
6 when I was elected or on the board, it was public.

7 Q. Okay. And did Triangle Pharmaceuticals
8 have any commercialized products?

9 A. No.

10 Q. Okay. The AIDS drug that you had talked
11 about that he was working on at Wellcome, is that a
12 project that continued at Gilead, or did it stay at
13 Wellcome?

14 A. Gilead acquired Triangle because we had a
15 drug that could be put in a double and triple therapy
16 with their drugs. And it was close to approval by
17 the FDA, and they made an offer, and this was --
18 unfortunately, David had passed away, and I was still
19 on the board. And there was a determination to let
20 Triangle be acquired by Gilead, by the board and by
21 the shareholders. And they continued the research
22 here in the Triangle to get approval of that drug,
23 and they put it in Truvada and the other triple
24 therapies, and it became the most successful AIDS
25 drug on the market.

1 Q. So did Triangle have any other types of
2 drugs, like a molecule to treat hepatitis B?

3 A. Yes, they did. They had some hepatitis
4 drugs in development.

5 Q. In development. Including hepatitis C?

6 A. I think it was B, but I'd have to -- I'm
7 not certain about that.

8 Q. And Gilead purchased that drug development
9 as well, correct?

10 A. Yes.

11 Q. Okay. So you were on the board from the
12 end of the 1990s until Gilead acquired Triangle,
13 which I believe was in 2003?

14 A. Yes.

15 Q. Do you recall what the purchase price was?

16 A. You know, in retrospect, it was too low, I
17 think. But I don't remember the exact amount. I
18 mean, they made billions on that triple therapy
19 which -- you know, we had talked -- before David
20 passed away, we had talked about more of an alliance
21 rather than a purchase. And, you know, I think they
22 made a very good purchase.

23 Q. So -- and Gilead continues today to sell
24 products to treat hepatitis and HIV, correct?

25 A. Yes.

1 Q. Okay. And you would agree that as a
2 consequence of the opioid crisis, there's been an
3 increase, unfortunately, increase in incidence of
4 hepatitis B and C and HIV?

5 MR. MORRIS: Objection to form.

6 THE WITNESS: That's a medical question.
7 I don't have an opinion on that.

8 BY MS. SUTTON:

9 Q. So you don't know one way or the other?

10 A. Yes.

11 Q. Okay. So you were on the board for a
12 number of years. Did -- were you paid -- did you
13 receive payment to be on the board?

14 A. What I received was stock options. I
15 never received any salary.

16 Q. Okay. Did you get any money at the time
17 of the sale of Triangle to Gilead?

18 A. No.

19 Q. Okay. But your stock options rolled over
20 into Gilead?

21 A. Yes, they vested there.

22 Q. Okay. They vested at Gilead, and then I
23 think you previously testified that you exercised the
24 options and donated the funds to Duke?

25 A. Yeah, although I may have misspoke there.

1 I think I donated my Amgen stock to Duke, rather than
2 my Gilead stock. But I'd have to go back and check
3 for sure.

4 Q. Okay. Do you remember the value of the
5 stock options that you exercised with Gilead?

6 A. No, not exactly, no. You know, they may
7 have been on the order of a little less than 100,000.

8 Q. Okay. And so the -- the stock that you
9 think you donated to Duke you now recall as being
10 Amgen stock?

11 A. Yes.

12 Q. Okay. And do you know what the value of
13 that Amgen stock was?

14 A. It was over 100,000.

15 Q. Was it less than 200?

16 A. Yes.

17 Q. Okay. Who were other members on the board
18 of Triangle Pharmaceuticals with you? Do you
19 remember?

20 A. Well, of course David Barry was the
21 founder, CEO, chairman. So he was the -- on the
22 board. There -- you know, I don't remember a lot of
23 the names, but as a startup, they -- they received
24 money from Venrock, which is a -- you know, a company
25 that funded startups, associated with the Rockefeller

1 Foundation. There was a person from the startup out
2 in California. There was the vice president of the
3 company was on the board.

4 So I think there were three venture
5 capitalist types. There were company officials, and
6 then there was the founder and CEO of a -- of a CRO.

7 Q. A contract research organization?

8 A. Yes.

9 Q. Do you recall which one?

10 A. That's the one in the Triangle here. Went
11 private -- I'd have to think about the exact name,
12 but . . .

13 Q. Okay. Is your understanding that contract
14 research organizations oftentimes work with
15 pharmaceutical companies?

16 A. Yeah, I think it -- the person was
17 Gillings, and he founded a local company.

18 Q. Okay.

19 A. And -- yeah, they did some work for us at
20 Triangle, because we were a smaller company, and we
21 outsourced some of the development tasks to CROs,
22 including the one that was headed by this individual.

23 Q. Okay. I think earlier I had asked you
24 what the purchase price, and I think you said you
25 didn't remember the exact amount, and then went on to

1 say that Gilead made billions of dollars off the
2 product. Do you have -- can you have an
3 approximation of -- of what the purchase price was?
4 Was it around 400 million?

5 A. That sounds about right. I think they
6 paid \$6 a share, but the company went public at \$12 a
7 share. And so the early shareholders publicly took a
8 beating.

9 And the reason for that was this drug was
10 being tested abroad, in the U.S. as well as in South
11 Africa. It ran into some issues of -- regulatory
12 issues in South Africa that wasn't -- they were doing
13 testing in triple therapies, and some adverse events
14 occurred that weren't associated with our drug. Our
15 stock dropped because we were a small company. And
16 that's when Gilead came in and took us over.

17 Q. Swooped it up?

18 A. Yes.

19 Q. Okay. So I was going to go into a topic
20 that's going to take a while. I know -- I don't know
21 if you want to do a break now or wait.

22 A. Yeah, I like to break every hour, just for
23 my back.

24 Q. Yeah, I get it. Thank you.

25 VIDEOGRAPHER: Going off the record. The

1 time is 11:31 a.m.

2 (A recess transpired from 11:31 a.m.
3 until 11:43 a.m.)

4 VIDEOGRAPHER: Going back on the record.

5 The time is 11:43 a.m.

6 BY MS. SUTTON:

7 Q. So we touched on this briefly before, but
8 your expert report said that you were assisted in
9 this case by the staff of Cornerstone Research.
10 That's correct, right?

11 A. Yes.

12 Q. Okay. How would you describe Cornerstone
13 Research?

14 A. Cornerstone Research does consulting
15 services relative to litigation, as well as related
16 to other matters. They provide support for experts
17 in litigation. They initially started as more
18 strategic analysis in the energy business and were
19 asked to help with some litigation. And then I think
20 over time they've evolved more into litigation
21 support, and so they have many Ph.D.s in economics
22 and related fields, MBAs. And some of them are
23 distinguished experts in their own right.

24 Q. Do you know how many people are employed
25 at Cornerstone Research?

1 A. No. I know they have offices in four or
2 five cities, but I don't know their total employment.

3 Q. Do you know how many people at Cornerstone
4 Research assisted you in your report in this matter?

5 A. Well, I mainly dealt with three
6 individuals. Greg Eastman. Ceren -- have to look up
7 her last name; I call her Ceren -- and Ross. Ceren
8 and Ross were the main individuals that I -- along
9 with Greg. And then they had a team that did some of
10 the technical analysis that sometimes were on phone
11 calls.

12 Q. Do you know how big that team was?

13 A. Could be three or four more individuals.

14 Q. Now, what -- how would you describe your
15 relationship with Cornerstone?

16 A. Over the years, I've used them on
17 litigation support. I've also used other firms, like
18 Analysis Group. But Cornerstone, I think, is one of
19 the top economics consulting firms. And I think they
20 do high-level support work.

21 Q. When did you first start working with
22 Cornerstone Research?

23 A. I would say between 10 and 15 years ago.

24 Q. Okay. Did you go to them, or did they
25 come to you? Do you recall?

1 A. Initially they contacted me about a case
2 that had some I think North Carolina connections to
3 it. I don't remember exactly what the case was, but
4 they -- they asked me if I was interested in serving
5 as an expert. I don't think it ever went to -- it
6 was more of an advisory kind of role, so I don't
7 think it ever went into litigation.

8 Q. And then from there, you just continued to
9 get more contacts from Cornerstone about additional
10 expert work?

11 A. Yeah, or I contacted them sometimes
12 when -- a lot of times law firms would contact me
13 directly, and I'd say, "Well, I'd like to have
14 support on this, because I'm a full-time faculty
15 member, initially, and to help me with this and
16 provide some, you know, data-crunching under my
17 direction," whatever.

18 And, you know, oftentimes the law firm
19 would agree, or they might say, "Well, we normally
20 work with this company; would you work with them?"

21 Q. But in this case, in the opioid
22 litigation, Cornerstone Research came to you to see
23 if you would be interested in working as an expert?

24 A. Initially, yes.

25 Q. Okay. Now, you're not an employee of

1 Cornerstone Research, are you?

2 A. No.

3 Q. So you don't receive a W-2?

4 A. No.

5 Q. But do you receive a 1099?

6 A. Yes.

7 Q. Okay. And would those 1099s reflect how
8 much Cornerstone has paid to you directly for your
9 work on -- with them?

10 A. Yes.

11 Q. Okay. Do you have any idea of how much,
12 over the years, Cornerstone has paid you for your
13 expert work?

14 A. No. It varies with how much involvement I
15 have with them on cases, and also how much activity
16 they do on those cases supporting me. And -- and
17 other functions, like I sometimes do continuing ed
18 for them, or . . .

19 Q. Okay. So like on a particular litigation
20 project, do you get paid a portion of what -- do you
21 get paid from Cornerstone services? Just trying to
22 understand how the -- the money works with -- when
23 you do expert work for Cornerstone in general.

24 A. I get a check a few times a year, and it
25 says "Thank you for your, you know, involvement, and

1 here's a check relating to our support of projects
2 that we jointly pursued."

3 And I think it is -- it has some basis in
4 percentage relationship, as well as it could involve,
5 you know, payment for some of the other things I do
6 for Cornerstone occasionally, like presentations at
7 breakfasts, continuing education, that kind of thing.

8 Q. Setting aside the breakfasts or the
9 continuing education, just talking about a litigation
10 matter where you're the expert and they're providing
11 support to you for your expert report, do you receive
12 a percentage of their billings?

13 A. I think that's the way they determine it,
14 but it also may vary over time. I don't know if the
15 percentage is fixed, or varies, or what.

16 Q. Okay. Do you have a -- is your
17 arrangement -- do you have any arrangements with
18 Cornerstone in writing?

19 A. No.

20 Q. Do you ever enter into a writing with
21 respect to what your -- the percentage is going to be
22 for a particular case?

23 A. No.

24 Q. And then how is that percentage
25 determined?

1 A. They determine it internally, and, you
2 know, they -- as I said, I get a check semi-annually
3 about -- relating to my work with them, but I don't
4 know exactly what the percentages is -- are or
5 what -- how it varies over time.

6 Q. So how big have the -- some of those
7 checks been for a particular project, if you don't
8 know what the percentage is?

9 A. It's not -- it's not for one project. So
10 I do four or five cases over the year, and I get two
11 checks. And, you know, I think the most recent check
12 was about \$20,000. Checks have been in that range.
13 Sometimes they are larger if there's a very intensive
14 workload on a case that goes to trial.

15 Q. So the checks don't come based on a
16 project. They just -- you get a certain number of
17 checks in a year?

18 A. Yes.

19 Q. Okay. And how -- how often do you get
20 checks from Cornerstone Research?

21 A. Semi-annually.

22 Q. Okay. And those checks are based on all
23 the projects and works that you -- work that you've
24 done with them over the -- during that six-month
25 period?

1 A. Yes.

2 Q. Okay. I'm just trying to understand how
3 that check gets calculated.

4 A. I think -- as I said, I think it's a
5 percentage basis, but it can vary. You know, there's
6 very -- they have various rules, or allocation rules,
7 and I've never inquired and said, "Well, you know,
8 how much am I getting related to this or that?"

9 I mean, they -- I trust them. There's an
10 attribution and -- based on work that they support me
11 on, and, you know, I never inquired about what the
12 exact percentage is. I think it -- it can vary,
13 depending on, you know, whether I brought work to
14 them or they contacted me. There can be other
15 variables.

16 Q. Okay. Do you know what the financial
17 arrangements are with Cornerstone for this case and
18 how Cornerstone is going to pay you for your work in
19 this case?

20 A. No. I think there will probably be a
21 percentage, some percentage. But it's -- you know,
22 as I say, the checks are not that large that I'm
23 getting a huge amount of their bills.

24 Q. Okay. So -- so you have no idea, then, as
25 you sit here, what the financial relationship with

1 Cornerstone is going to be on your work in the opioid
2 case?

3 A. That's correct.

4 Q. Okay. Did you get a check at the end of
5 2018?

6 A. I got a check in March, I think, of this
7 year.

8 Q. Okay. And was that for the prior six
9 months, or . . .

10 A. You know, I don't know. You know, I think
11 there's some lags in the process, so it could have
12 been for the last six months of last year, or . . .

13 Q. Okay. And Cornerstone started working and
14 supporting you on this case last -- in the summer of
15 last year, correct?

16 A. Yes, although I think the work really
17 started towards the end of the year.

18 Q. Okay. How much was the check that you
19 received in March?

20 A. I think it was like 20,000.

21 Q. Okay. And did that include -- for -- for
22 that time period, did it include work on this case?

23 A. Possibly, yes. Probably, yes.

24 Q. Okay. Did it include work on any other
25 cases?

1 A. Well, let me look at my workload here.

2 It might have included work on some other
3 cases. But it looks like the deposition and trial
4 testimony for Galderma at the end of -- in October
5 and December of last year. Cornerstone wasn't
6 involved in that.

7 Q. Okay.

8 A. Couple of the other cases where I
9 testified earlier in the year, Cornerstone was
10 involved, but -- so I don't know the lag involved
11 there.

12 Q. Okay. So when you get a check from
13 Cornerstone, does it come with any paperwork, or is
14 it just a check?

15 A. It's a check with a "thank you" letter.

16 Q. And does the "thank you" letter have any
17 more than just "Thank you"? Does it have any
18 substance to it?

19 A. It has no -- if you're talking about
20 accounting, no, there's no accounting of -- you know,
21 "This is the amount associated with this project."
22 But it is a check saying, "This is attribution to you
23 for work that we jointly did. We continue to have a
24 good relationship, and" -- you know, that kind of
25 letter. It's a two-paragraph letter.

1 Q. Okay. But it doesn't have any accounting
2 or division of, you know, where the money -- why
3 certain funds are being paid for what projects? It
4 doesn't include that kind of information?

5 A. That's correct.

6 Q. Okay. How many projects do you think
7 you've worked on with Cornerstone over the years?
8 Litigation projects?

9 That's only four years.

10 A. Right. No, and I've only worked with
11 Cornerstone maybe ten years, and I started not doing
12 a lot with them, and then as I gained confidence that
13 they were a really excellent team to work with, I --
14 I did more work with them.

15 Q. Okay.

16 A. Maybe there's a dozen here over the last
17 four and a half years, and then maybe another dozen
18 going back in time.

19 Q. Okay. We're going to go through some of
20 those lists, and maybe we can -- maybe you can
21 identify them when we get to those, which ones were
22 Cornerstone projects and which ones weren't.

23 So I'm going to show you what's been
24 marked as Exhibit 4. And I think you have this.
25 These are the invoices that were provided to us early

1 this morning by your counsel.

2 (Exhibit 4 was marked for identification.)

3 MR. MORRIS: Just so I know which, is it
4 the full set, or the ones that are --

5 MS. SUTTON: No, just the Grabowski.

6 MR. MORRIS: Got it.

7 BY MS. SUTTON

8 Q. So do you recognize these four invoices?

9 A. Yes.

10 Q. And these are invoices that you prepared,
11 correct?

12 A. Yes.

13 Q. And you submit them to Arnold & Porter for
14 payment?

15 A. Yes.

16 Q. And then Arnold & Porter writes a check to
17 you, not to Cornerstone, correct?

18 A. Yes.

19 Q. They pay you directly. All right.

20 And these seem to be -- appear -- these
21 invoices seem to be appear -- appear -- strike that.

22 These invoices appear to be current
23 through May 31st of 2019; is that correct?

24 A. Yes.

25 Q. And I assume you've had some additional

1 work in June?

2 A. Yes.

3 Q. Do you have any idea how many hours?

4 A. So today's the 6th. We've had some prep
5 sessions. I've done some review. Maybe another
6 20 hours.

7 Q. Okay. So I took the liberty of adding up
8 the hours that are set forth in these exhibits, and I
9 came to a total of 182 hours. Does that sound about
10 right?

11 A. Yes.

12 Q. And then plus an additional 20. And if
13 you're using your hourly rate in the totals that you
14 said were due, I came up with a total of \$145,600.
15 Does that sound about right?

16 A. So --

17 Q. I think my math is right.

18 A. I was just looking at this. So you're
19 saying it's how much? 164?

20 Q. \$145,600.

21 A. Well, if it was 200 times 8 -- yeah, I
22 guess that's right.

23 Q. Okay. And have you been paid -- are all
24 these -- have these statements all been paid?

25 A. My understanding is they've been approved

1 by the company, but I don't know that they've -- I
2 don't believe they've actually -- I haven't checked
3 recently, but I don't -- they -- you know, they do
4 a -- they do a transfer into my bank account.

5 Q. Okay. And you -- you have a -- it's
6 transferred into Grabowski Associates, Inc. Is that
7 like an LLC that you've set up?

8 A. It's a C corp, yes.

9 Q. C corp. And this is a C corp for your
10 expert work?

11 A. Primarily, yes.

12 Q. Okay. Just a few questions about these
13 bills. I haven't had a lot of time to study them,
14 but I see -- I was trying to identify the amount of
15 time that's indicated here that you spent reviewing
16 academic and economic studies, and it looks like on
17 June 15th, 2018, you spent 5 hours reviewing studies.
18 And then on the next statement, on March 29th, 2019,
19 you spent another 5 hours reviewing academic and
20 economic studies.

21 I didn't see any other references to you
22 working on the review of the literature, other than
23 those two references. So is it fair, then, to say
24 that you spent about 10 hours reviewing the academic
25 and economic literature?

1 A. I would think it's more, that -- you know,
2 those were the days where that was the primary task,
3 but I have a lot of items like work on draft reports,
4 which could be searching literature for a particular
5 reference.

6 Q. So do you -- can you estimate how much
7 more time beyond the 10 hours that are described you
8 may have spent reviewing economic or economic studies
9 -- academic or economic studies?

10 A. Well, it -- it would also be in
11 conjunction with like Rosenthal referenced something,
12 and I looked at that. And similar with Cutler,
13 Gruber, and McGuire. So, you know, probably a
14 multiple of those -- those 10 hours. Maybe a
15 multiple of 5 or something.

16 Q. So could be up to 50 hours --

17 A. Yeah.

18 Q. -- you're thinking? Okay. Of your
19 approximately 200 hours you've spent on this case.
20 Okay.

21 Then I wanted to ask you about an entry on
22 the second invoice, the April invoice. The entry is
23 for March 13th, 2019; it indicates 5 and a half hours
24 for report draft and agenda. Do you see that?

25 A. What date is that?

1 Q. March 13, 2019. Says "Report draft and
2 agenda."

3 A. Okay. These are a little out of order.

4 Q. I'm sorry.

5 A. Yes.

6 Q. Okay. I'm just trying to understand what
7 this entry is. Is this when you received a draft of
8 the report, and you're reviewing it?

9 A. No, I think the way I usually work is to
10 prepare an outline of, you know, what I think the
11 report will look like, what -- what agenda I have to
12 pursue to kind of fill in the placeholders. And so I
13 think this is a draft outline more than a report
14 draft.

15 Q. Okay. I just didn't see the word
16 "outline," because -- like on the next invoice, on
17 March 15th, which is approximately a month later,
18 there is an indication of a draft report outline.

19 A. Yeah, so there's an evolutionary process.
20 And at this point we didn't have a draft, I'm pretty
21 sure, in March. We had an outline.

22 Q. Yeah. And you mentioned placeholders,
23 that you put placeholders in your -- in your outline?

24 A. Yeah, that's part of an agenda saying,
25 "Here's an outline of the likeliest report, which

1 changes over time as we get into it, but -- and
2 here's some of the things we need to do to implement
3 this report."

4 Q. Right. And are these outlines then shared
5 with Cornerstone?

6 A. They're discussed with them, yes.

7 Q. Yeah. You've been saying "we." Is that
8 that -- you're referring to working with Cornerstone?

9 A. Yes.

10 Q. Does the "we" include attorneys, or . . .

11 A. Not at this stage, no.

12 Q. Okay. So when you would indicate that
13 there are placeholders in the outline, sometimes
14 would you have Cornerstone fill in those placeholders
15 or draft those placeholders for you?

16 A. I think they would do some literature
17 search under my direction, or various tasks under my
18 direction, yes.

19 Q. Would they provide language to you?

20 A. In some cases they might, but I would
21 always edit it in my -- you know, it was always my
22 report, so if they drafted anything like a discussion
23 in Table 1, then I would edit it or redraft it.

24 Q. So in your expert report, did they draft
25 any -- or propose any drafts of any of the language

1 in the actual body of the report?

2 A. I wouldn't characterize it that way. I
3 think -- you know, it started with my outline, my
4 words, and sometimes I would delegate a particular
5 section related to literature or a search or
6 something, and they might put words down, and then I
7 would edit it so that it reflected my opinion.

8 Q. Do you still have a copy of the -- of the
9 outline, finished outline you did for this report?

10 A. I don't think so.

11 Q. Okay. So sometimes they would, then,
12 provide you with language for certain sections of the
13 report that you would then review and edit?

14 A. Yes.

15 Q. Okay. Would they ever -- did you share
16 drafts with them of your report as it was being put
17 together?

18 A. Yes.

19 Q. And then would they provide edits or
20 markups to you?

21 A. They -- they could -- they could provide
22 suggestions, yes.

23 Q. Okay. And how would they typically do
24 that?

25 A. We would go over a section of the report,

1 and they might suggest doing further, you know,
2 citations or something.

3 Q. Okay. Would you have those conversations
4 on the phone, or would they do like markups, like a
5 redline markup on the actual document? How would
6 that happen? Or would it happen both ways?

7 A. We would have a Zoom -- you know, the
8 draft evolved over time, and we would do it generally
9 on Zoom, and we would look at it, and, you know, it
10 would go through another iteration. We would look at
11 it again.

12 Q. Okay. When you were on Zoom and you were
13 looking at it together sometimes, would you then send
14 them off to do certain things on your report before
15 you would have the next meeting?

16 A. Yes.

17 Q. Okay. And how many meetings do you think
18 you had with Cornerstone about your report?

19 A. Once we got into March, where we were kind
20 of more intensively involved in the report and
21 responding to Rosenthal, I think we agreed to have a
22 discussion every Thursday. But sometimes that, you
23 know, would shift to Wednesday or Friday. But it was
24 at least weekly, beginning in March.

25 Q. Okay. And then I see references to

1 conference calls in your invoices. Would that be --
2 is that referring to those conference calls with
3 Cornerstone?

4 A. Primarily, yes.

5 Q. Would you have conference calls with other
6 people that might be indicated in these invoices
7 besides Cornerstone?

8 A. I think once or twice the attorneys, we
9 had a call with the attorneys to give us some update
10 on the case.

11 Q. Okay. Would the attorneys be present on
12 the conference calls with Cornerstone?

13 A. Sometimes.

14 Q. How -- could you say how often that would
15 happen?

16 A. A few times.

17 Q. Was it more often that you would have
18 conference calls with Cornerstone where attorneys
19 weren't present?

20 A. Yes.

21 Q. Okay. So you would -- during the Zoom
22 meetings, would you be sharing the document on a
23 screen that you were -- everyone was looking at?

24 A. Yes.

25 Q. Okay. Do those -- did those documents as

1 they -- are they still in existence as they were up
2 on the screen with Cornerstone when there were no
3 lawyers present?

4 A. No, I don't think so, because the
5 documents --

6 Q. You wrote it over?

7 A. Yes.

8 Q. Okay. So then the Rosenthal report came
9 in -- I think you received it March 25th. Did -- and
10 I assume you communicated with Cornerstone about what
11 the Rosenthal report said, right?

12 A. Yes.

13 Q. Okay. Did they -- did Cornerstone provide
14 any written critique or analysis of the Rosenthal
15 report to you?

16 A. No, I provided the critique and shared it
17 with them.

18 Q. Okay. So I'm going to show you something,
19 what's been marked as Exhibit 5. And this was
20 provided to us early this morning from your counsel,
21 and it purports to be the -- the bills that
22 Cornerstone has -- the invoices Cornerstone has
23 created for their work with you in this case.

24 (Exhibit 5 was marked for identification.)

25

1 BY MS. SUTTON:

2 Q. I'm not sure. Do you -- have you ever
3 seen that before?

4 A. I saw it briefly yesterday in my prep
5 session with Sean Morris.

6 Q. Do you generally see Cornerstone's bills
7 for the projects you work on?

8 A. No, I've never seen them prior to this
9 case.

10 Q. Okay. And is your understanding that
11 Cornerstone would have sent this bill to Arnold &
12 Porter for payment?

13 A. Yes.

14 Q. Okay. What -- what time yesterday did you
15 see those invoices? Do you recall?

16 A. Yesterday afternoon.

17 Q. Okay. So I'm not going to ask you a lot
18 about those. Have you looked at those very
19 carefully?

20 A. No.

21 Q. Okay. Have you -- have you reviewed them
22 at all?

23 A. More for who are these people, you know.

24 Q. Right.

25 A. And you know these people. And I do know

1 several of them. Some of them I -- several of them
2 were on calls, the primary person, people that I knew
3 was -- or recognize as James Eastman, Robby Letson,
4 certainly Ceren Aruoba, and Ross was on the call, or
5 several calls. And, you know, some of the other
6 individuals selectively on the team, that the
7 technical or --

8 Q. So are there names on there that you don't
9 recognize?

10 A. Yes, there are a few names that were on
11 the technical team doing, you know, some of the data
12 crunching that didn't come onto the call, I think.

13 Q. All right. So some of the names were new
14 to you when you were flipping through that?

15 A. Yes.

16 Q. Okay. So I think we had talked about how
17 you had spent 182 hours in billings in these invoices
18 that make up Exhibit 4, and -- and you said you've
19 testified that you worked an additional 20 hours.

20 So we took a look at these invoices from
21 Cornerstone, and they reflect 1,239.6 hours on the
22 project supporting you through April 2019. And
23 adding up the amount that they have billed, it's
24 \$478,600.

25 So is it your understanding that these

1 bills are provided to Arnold & Porter for payment?

2 A. Yes.

3 Q. And --

4 A. Well, ultimately Endo, I guess, but . . .

5 Q. So do you have any understanding of the --
6 through April, of the \$478,600 that they're going
7 to -- that they have billed or will bill to Arnold &
8 Porter, what percentage you're going to receive or
9 how much you will receive of that?

10 A. So maybe 5 percent. I don't know. It's a
11 guess, but . . .

12 Q. Have you had any discussions with Greg
13 Eastman or Ceren or any folks at Cornerstone about
14 how much you're going to receive from Cornerstone
15 that they've billed to Arnold & Porter?

16 A. No, but, you know, in some -- in some
17 contractual relationships that I have with, you know,
18 other firms, they -- they spell out, you know, "We're
19 going to give you 5 percent for work that we bring to
20 you, and we're going to give you 7 and a half percent
21 if you bring the work to us."

22 So that's a kind of typical industry norm,
23 if you want. I don't know if Cornerstone adheres to
24 that or not.

25 Q. Okay. And you're not going to make any

1 demand on them on what the percentage is going to be?

2 You're just going to let them decide?

3 A. Yes.

4 Q. Okay. But you think it will probably be
5 around 5 percent?

6 A. Something like that, yes.

7 Q. Okay. All right. Let's move to
8 another -- sorry; too much paper -- expert witness
9 organization I think you've worked with. Have you
10 worked with a group called the Analysis Group?

11 A. Yes.

12 Q. Okay. And what's your understanding of
13 the Analysis Group? What do they do?

14 A. They are -- do similar things to
15 Cornerstone. They provide expert support. They
16 do -- they have their own set of experts on cases.
17 They do academic work. I've done some publications
18 with individuals at Analysis Group. So they -- their
19 work, you know, they do cost-effectiveness analysis
20 for the industry or for -- or health entities.

21 MS. SUTTON: Okay. So I'm just going to
22 have you mark -- I think we're up to 6.

23 (Exhibit 6 was marked for identification.)

24 BY MS. SUTTON:

25 Q. So 6 is -- comes from the Analysis Group

1 website, and it's -- it's a listing of you and
2 your -- your experience and background. Do you see
3 that?

4 A. Yes.

5 Q. Okay. And I think you also appear on the
6 Cornerstone website as well, correct?

7 A. I haven't looked at it, but I would
8 presume so, if they list their experts.

9 Q. Right. And it has a summary of your
10 experience. And you would agree that that explains
11 your relevant experience in the field, right?

12 A. Yes.

13 Q. Okay. So it sounds like you do different
14 types of work with the Analysis Group. So you've
15 authored some articles through the Analysis Group?

16 A. Yes.

17 Q. Okay. Do you know how many?

18 A. I can recall at least three.

19 Q. Are they for the actual peer-reviewed
20 literature, or are they for more -- different types
21 of literature?

22 A. Peer reviewed.

23 Q. Peer reviewed. Okay.

24 And how -- how does it come about that you
25 end up working with Analysis Group on peer-reviewed

1 literature?

2 A. It either could be at my initiation or
3 their initiation. So the particular articles that we
4 did on the -- the average exclusivity period between
5 when a brand enters the market and when a generic
6 first enters the market, we've done a series of
7 papers on that, and it builds on some work I had gone
8 with Margaret Kyle, who was at Duke and now is at a
9 university in Paris.

10 And the -- PhRMA approached us to kind of
11 follow up on that work, and they suggested -- they
12 had worked with Analysis Group, and they suggested
13 that I -- we go ahead, and Analysis Group would be a
14 collaborator and do some of the number-crunching, and
15 I would supervise it and essentially write the
16 article.

17 Q. Right.

18 A. And that's the way that -- those three
19 articles evolved.

20 Q. Right. And so then they -- they're
21 providing support to you in writing the article; is
22 that a fair way to describe it?

23 A. More they're colleagues, and that when
24 it's a publication, they provide support, but they
25 also, you know, help structure the project, you know,

1 that -- these are Ph.D. individuals that are
2 respected and do publications.

3 You know, I also have used Analysis Group
4 in litigation support.

5 Q. Right.

6 A. Some of -- people there. But --

7 Q. With respect to authors, then, the people
8 that you collaborate with from Analysis Group, do
9 they appear as listed authors on the article?

10 A. Yes.

11 Q. Okay. And the articles that you were
12 talking about, you mentioned PhRMA, which is -- would
13 PhRMA have provided funding for the article?

14 A. Yes, although in some cases I was unpaid.

15 Q. Okay.

16 A. Because I -- I felt a conflict of
17 interest, at least -- at least in one of them.

18 Q. And why -- why was that?

19 A. Well, that I was involved in some other --
20 you know, other matters involving generic competition
21 and exclusivity, and I just felt -- I would be -- I
22 could be an academic, but I didn't want to take a
23 paid physician for the article.

24 Q. Okay. So the -- the funding would go to
25 maybe the folks in Analysis Group then? Or . . .

1 A. Yes.

2 Q. Okay. Do you know how much funding PhRMA
3 provided to -- to you or the Analysis Group for these
4 projects that you worked on?

5 A. I'd have to go back in my records. On a
6 few where I was paid, it was, you know, a lot less
7 than what I get in litigation.

8 Q. Yeah. So let's talk about -- you
9 mentioned that you worked with Analysis Group on
10 litigation. Is it in a kind of a similar capacity
11 with what you describe with Cornerstone?

12 A. Yes.

13 Q. How many projects, legal projects, do you
14 think you've worked on with the Analysis Group?

15 A. At least a half-dozen.

16 Q. Okay. And how long have you been working
17 with them?

18 A. You know, it goes back a lot of years. I
19 would say at least ten years.

20 Q. Okay. Now, how does that -- just to
21 understand how it works, if it works like it does
22 with Cornerstone, do you get a -- a share of -- of
23 the billings of the Analysis Group in projects
24 where they're -- litigation projects where they're
25 supporting you?

1 A. Yes.

2 Q. Okay. And is that a set percentage?

3 A. Yes.

4 Q. And what is the percentage?

5 A. It varies from 5 to 7 and a half.

6 Q. Okay. And do you get paid by project, or
7 do you get paid on a -- on a monthly or annual basis?

8 A. Analysis Group gives you very detailed
9 accounting by month.

10 Q. Okay. So you would see the sorts of
11 invoices that I just previously showed you for
12 Cornerstone, you would see that type of information
13 from Analysis Group?

14 A. No.

15 Q. It would be less detailed?

16 A. Yeah. Very less detailed.

17 Q. But you would -- you would get information
18 about what they had billed and collected on the
19 projects that you worked on with them?

20 A. Yes.

21 Q. Okay. Do you know if Analysis Group is
22 involved in this litigation?

23 A. I do not know.

24 Q. Do not know. Okay.

25 Maybe we'll do one more, and then take --

1 this will be short, and then do you guys want to have
2 lunch?

3 MR. MORRIS: Sure. I think it's in the
4 next room, so . . .

5 MS. SUTTON: Yeah. It's 12:30.

6 BY MS. SUTTON

7 Q. So -- okay.

8 The Brattle Group, have you heard of an
9 organization called "the Brattle Group"?

10 A. Yes.

11 Q. And are they a similar type organization
12 to Cornerstone and -- and Analysis Group?

13 A. Yes.

14 Q. Okay. So -- and again, I think you're
15 listed on their website, does that make --

16 A. Yes, I am.

17 Q. Okay. How long have you been associated
18 with the Brattle Group?

19 A. Well, the Brattle Group bought out a
20 company that I worked with many -- my first real
21 litigation was back in the '80s. I worked on a
22 so-called DES long-tail liability with a company -- I
23 forget the exact name -- that Brattle eventually
24 acquired. And so I would say that I worked with --
25 since the '80s with the Brattle, or their previous

1 version of the Brattle.

2 Q. So you're listed as an academic advisor on
3 their website. What does that mean? Do you know?

4 A. Well, a lot of work I've done with Brattle
5 have been more consulting, nonlitigation.

6 Q. And consulting with whom?

7 A. Consulting like -- one case, give you at
8 least a flavor of the case, is a company -- the IRS
9 wants to get a company to pay more, based on
10 international relationships or affiliates, and, you
11 know, I was brought in to sort of analyze it and give
12 them some advice.

13 Q. Was the company in -- in question a
14 pharmaceutical company?

15 A. Yes.

16 Q. Okay. Can you tell us which one?

17 A. No.

18 Q. Okay. Can you tell us how much you were
19 paid to do that?

20 A. Maybe 20,000. It wasn't a big job, in
21 terms of hours.

22 Q. Have you had similar projects like that
23 with the Brattle Group?

24 A. Yes. We're talking about the Brattle
25 Group?

1 Q. Right.

2 A. You mean other projects?

3 Q. Yeah, other projects, like consulting
4 projects with the Brattle Group besides the one
5 you've discussed.

6 A. Not that I can recall.

7 Q. Okay. So just the one?

8 A. Yes.

9 Q. All right. Now, have you also
10 been working with the Brattle Group in litigation?

11 A. Yes.

12 Q. Have they provided support services to you
13 in your role as an expert witness?

14 A. Yes.

15 Q. Do you know on how many cases?

16 A. Well, there was this one, one that went on
17 many years, complex litigation in California and then
18 New York. Long-tail liability. And so that was a
19 major case. But then I didn't do much work with
20 them, maybe two or three more cases since then.

21 Q. Okay. Does it work similarly to the other
22 two expert research groups, where you get a
23 percentage of Brattle Group's billings?

24 A. Not in the 1980s. I think that was
25 something that came about more recently, after 2000,

1 this attribution fee to experts.

2 Q. Okay. And then do you have a set
3 percentage agreement with Brattle Group?

4 A. I think it could be similar to Analysis
5 Group, the 5 or 7 and a half percent range.

6 Q. Okay. And that started in the 2000s when
7 you were working with the Brattle Group?

8 A. Yes.

9 Q. Okay. And how did that come about? Did
10 you raise the idea with them that you would get an
11 attribution percentage, or did they bring that idea
12 to you? Do you recall?

13 A. I don't recall specifically with Brattle
14 Group, but one of the groups raised the -- or said
15 they were going to pay attribution fees to -- to
16 economists or experts. And then, you know, it became
17 more widespread.

18 Q. Okay. So we've talked about Cornerstone.
19 We've talked about Brattle. We talked about the
20 Analysis Group. Are there any other expert witness
21 service organizations you work with that I've missed?

22 A. I worked once, many years ago, with
23 Charles Rivers, which is in Boston.

24 Q. Right. Did you have an attribution fee
25 arrangement with them?

1 A. I don't believe so.

2 Q. Okay. Are there any other expert witness
3 organizations that you work with?

4 A. I think it's those four.

5 Q. All right. Okay. Thank you. Good time
6 for lunch?

7 MR. MORRIS: Sure.

8 MS. SUTTON: Okay.

9 VIDEOGRAPHER: Going off the record. The
10 time is 12:28 p.m.

11 (A luncheon recess transpired
12 from 12:28 p.m. until 1:13 p.m.)

13 VIDEOGRAPHER: Going back on the record.
14 The time is 1:13 p.m.

15 MR. MORRIS: So before you ask your first
16 question, Professor Grabowski has some
17 information about his attribution percentage you
18 were asking him about before.

19 MS. SUTTON: Sure.

20 THE WITNESS: Yeah, so I talked to
21 Cornerstone Ceren Aruoba, and she confirmed that
22 it's 7 and a half percent in this case.

23 (Exhibit 7 was marked for identification.)

24 BY MS. SUTTON

25 Q. Thank you. I appreciate that.

1 I'm going to -- moving on to a different
2 topic, I wanted to show you what's been marked as
3 Exhibit 7, which is a declaration by you, dated
4 March 28th, 2013. My understanding is that this
5 declaration --

6 MR. MORRIS: Do you have one of those?

7 BY MS. SUTTON:

8 Q. -- was submitted on behalf of Purdue
9 Pharma in a patent case involving the potential
10 approval of generic oxycodone. Is that your
11 recollection?

12 A. No. I -- I think I submitted it on behalf
13 of Endo in a patent case. But maybe -- maybe this
14 is . . .

15 Q. If you look at paragraph 6 on page 2?
16 Does that -- does that refresh your recollection that
17 you were hired by Purdue Pharma in this matter?

18 A. Oh, okay. I had another case where I was
19 opposed to Pharma but -- or to Purdue, thinking in my
20 mind.

21 But yes, this was in conjunction with
22 their reformulated OxyContin, that -- I don't believe
23 I testified in this case, but . . .

24 Q. You provided a declaration, though,
25 correct?

1 A. Yes.

2 Q. And was the declaration sworn?

3 A. Yes, I think so.

4 Q. Okay. So you said "reformulated
5 OxyContin." What's your understanding of what that
6 means?

7 A. That was their crusher-proof --
8 crusher-resistant OxyContin.

9 Q. And do you know why they made it
10 crusher-resistant?

11 A. Because OxyContin was subject to, you
12 know, abuse, and they wanted to have a version that
13 was less subject to abuse.

14 Q. Okay. And do you recall what -- what
15 opinion you gave in this case?

16 A. I think it was that generics should not
17 enter -- or the FDA should not approve generics that
18 were nontamper resistant ---

19 Q. And did you give a reason why?

20 A. Well, that -- you know, I'd have to look
21 at it. It's been a while since this occurred.

22 So I think I was dealing -- analyzing
23 substitution rates here, and that the
24 nontamper-resistant generic oxycodone might have a
25 large share of oxycodone, and whereas the FDA I think

1 was receptive to -- or and approved a non -- or a
2 tamper-resistant.

3 And so I was trying to analyze the
4 economics, if you have both a nontamper-resistant
5 generic and a reformulated crush-resistant OxyContin,
6 what would that mean for market shares.

7 Q. And you determined that -- that the
8 nontamper-resistant generic oxycodone might have a
9 larger share of the oxycodone market?

10 A. Yes.

11 Q. Yeah. And in part, you do talk about in
12 here the fact that people might be driven to the
13 nontamper-resistant because of the abuse potential,
14 correct?

15 A. Yes.

16 Q. Okay. So do you recall which law firm had
17 hired you in this case?

18 A. No. I think I worked with Analysis Group
19 on the case, but --

20 Q. But you don't remember which law firm?

21 A. That's correct.

22 Q. Okay. So was this your -- had you
23 represented Endo prior to -- to this case?

24 A. Yes.

25 Q. Okay. So this wasn't the -- your first

1 representation of a company that sold opioids?

2 A. Right.

3 Q. Okay. The work that you just mentioned
4 you did for Endo, was that related to opioids?

5 A. It was related to -- Endo was a generic at
6 the time, and they were trying to enter the market
7 for OxyContin, and they were challenging the patents.
8 And I was representing Endo in that matter.

9 Q. And that was against Purdue?

10 A. Yes.

11 Q. And that was -- was it before or after
12 this?

13 A. It was before this.

14 Q. Okay. So did you ever disclose the work
15 you did on behalf of Purdue here to Endo as part of
16 your working with them in this case?

17 A. I don't think so. It's -- you know, I --
18 it's a declaration. And it had slipped my mind even
19 that I did a declaration to the FDA.

20 Q. Do you have any idea how many hours you
21 would have devoted to preparing this declaration?
22 It's 25 pages, with some analysis.

23 A. Maybe 80 hours.

24 Q. Okay. And the declaration states at this
25 time you were charging \$800 an hour, which is what

1 you charge now, right?

2 A. Yes.

3 Q. Okay. You can set that aside.

4 The Duke University has a school of
5 medicine, correct?

6 A. Yes. Very distinguished.

7 Q. I was going to say that. Very acclaimed
8 school of medicine. Have you taught any courses
9 there?

10 A. No.

11 Q. Okay. Are you aware of their policy for
12 industry relations?

13 A. Generally, yes.

14 Q. Are you aware of whether Duke Hospital
15 places any restrictions on detailing by
16 pharmaceutical drug representatives?

17 A. I think some years back, I don't know how
18 many years, they decided -- I know they decided to
19 stop accepting samples. I don't know about
20 detailing.

21 Q. Okay. So you don't know if -- if Duke
22 restricts pharmaceutical representatives from
23 detailing the doctors at the school of medicine, or
24 the students?

25 A. No, I don't know that.

1 Q. Okay. This came up briefly earlier, the
2 Tufts Center for Study of Drug Development. Is it
3 okay if we call it "CSDD"? Do you -- is that what
4 you call it?

5 A. At times, yes.

6 Q. It is a shorter acronym.

7 And you testified earlier that you've done
8 work with Dr. DiMasi. Do you consider him a
9 colleague?

10 A. Yes. Not a Duke colleague, but a
11 colleague in economics, yes.

12 Q. And you have coauthored a number of papers
13 with him, correct?

14 A. Yes.

15 Q. And your relationship with him goes back
16 decades, right?

17 A. Yeah, maybe 20 years.

18 Q. Okay. And when I was looking at your CV,
19 it looked to me like you've coauthored maybe a dozen
20 articles with him. Does that sound about right?

21 A. It could be a dozen, but some of them are
22 just comments to -- you know, so we write a short
23 comment in the literature.

24 Q. Are you -- I think you mentioned earlier
25 that you are working with him on a study right now.

1 Is it an update to your drug development cost study?

2 A. It's related, of sorts, but it's not a --
3 a full update.

4 Q. Okay. You're not going to be calculating
5 a new number for the development of a drug from
6 its -- from its infancy to commercialization?

7 A. That's correct.

8 Q. You're not. Okay.

9 A. No, we're going to focus in on a
10 therapeutic group.

11 Q. Oh. What therapeutic group?

12 A. Oncology.

13 Q. Okay. So cancer drugs?

14 A. Yes.

15 Q. Okay. Did anybody ask you to do that?

16 A. Yes.

17 Q. Who?

18 A. We have a grant from Pfizer.

19 Q. How much is the grant?

20 A. I think with everything, including travel,
21 research assistants, everything, it's about 120K.

22 Q. So when do you expect that to be ready for
23 publication?

24 A. Hopefully by the end of the summer.

25 Q. Okay. So pretty far along, then?

1 A. It's -- you know, we have preliminary
2 results, but we're doing further analysis.

3 Q. So I think in the -- the study that you
4 did, it was published in 2016, and we can get it out
5 if you don't recall, but it seems like that the
6 average private sector cost to develop a new drug was
7 just under 2.6 billion in the study that you
8 published; does that sound right?

9 A. Yes.

10 Q. Okay. So do you have even a preliminary
11 calculation with respect to the cancer medications?
12 Are they going to be above that or below it?

13 A. They're going to be commensurate with it.

14 Q. Commensurate with it, okay. So in the
15 ballpark?

16 A. Yes.

17 Q. Okay. So Dr. DiMasi, my understanding is
18 he's a -- a director at CSDD. He's director of
19 economic analysis. Does that sound right?

20 A. Yes.

21 Q. Okay. And I think he's also a research
22 associate professor at the Tufts Department of Public
23 Health; are you aware of that?

24 A. Yes.

25 Q. So it's like a dual position?

1 A. Yes. All of the faculty at -- CSDD is
2 part of public health now, and they're all faculty
3 positions.

4 Q. Okay. So have you ever talked to
5 Dr. DiMasi about Tufts' relationship with the Sackler
6 family?

7 A. No.

8 Q. Okay. And are you aware that Tufts has
9 hired an independent investigator to look into the
10 financial contributions that the Sackler family has
11 provided over the years to Tufts University?

12 A. I'm not aware of that, no.

13 Q. Okay. Just asking -- wondering if maybe
14 you talked to Dr. DiMasi about that.

15 So have you ever been on the board of
16 CSDD?

17 A. Yes.

18 Q. Are you on the board now?

19 A. No.

20 Q. Okay. When were you on the board?

21 A. You know, I -- it spanned a period maybe
22 from the late '90s through sometime in the 2000s.

23 Q. Okay. So you went off the board sometime
24 in the 2000s?

25 A. Yeah, the board, as it was constituted,

1 there was a new director, and I think he didn't think
2 they needed a board, so I don't think there is a
3 board anymore.

4 Q. Right. I looked at the website, and I
5 couldn't find a board, so -- right.

6 When you were on the board, were there any
7 board members from the pharmaceutical industry?

8 A. No.

9 Q. Okay. So is it your understanding that
10 CSDD does not receive any funds from Tufts
11 University?

12 A. I don't know one way or the other.

13 (Exhibit 8 was marked for identification.)

14 BY MS. SUTTON:

15 Q. Okay. So this comes from the CSDD
16 website. And if you turn to the second page, it
17 talks about who sponsors Tufts.

18 It says that "Tufts CSDD relies on the
19 support of its corporate sponsors to help cover
20 operating expenses and support nonsponsored research
21 studies, such as our highly cited series of papers on
22 the cost of pharmaceutical R&D. Note that Tufts CSDD
23 receives no financial support from Tufts University
24 and is required to be self-supporting. That is why
25 corporate support is vital." You see that?

1 A. Yes.

2 Q. Okay. So I read this to mean that CSDD
3 gets their support from corporate sponsors.

4 A. Not exclusively. This is a -- the mission
5 for corporate money, but they -- I know for a fact
6 they have received government grants, that they have
7 received foundation grants.

8 Q. Right. And we can look at that.

9 (Exhibit 9 was marked for identification.)

10 BY MS. SUTTON:

11 Q. Exhibit 9 is a financial disclosure from
12 their website, and then it says that -- in the second
13 sentence, it says they receive unrestricted grants
14 from pharmaceutical and biotechnology firms as well
15 as companies that provide related services to the
16 research base industry, contract research consulting
17 and technology firms, and that those grants represent
18 25 percent of the operating expenses.

19 And then it goes on to say that they --
20 their additional funding comes from government and
21 foundation support. Is that consistent with your
22 understanding of how CSDD is funded?

23 A. Right. And the cost studies are not
24 funded by any directed money from any pharmaceutical
25 firm.

1 Q. Okay. But pharmaceutical money is used
2 for the cost studies?

3 A. Not necessarily. I mean, it's -- it's
4 work we do, but it's not like a dedicated amount of
5 money is focused on these projects.

6 Q. Okay. I probably misspoke, then. My
7 understanding is that the drug development cost
8 studies are funded by the Tufts Center for the Study
9 of Drug Development.

10 A. Yes, in the sense that they pay Joe
11 DiMasi's salary.

12 Q. Right. And the Tufts Center for Study of
13 Drug Development does receive money from the
14 pharmaceutical industry?

15 A. Right. And I have never received any
16 money for any of the cost studies.

17 Q. Okay. So you -- you don't receive any
18 money for the cost studies from Tufts Center for
19 Study of Drug Development, correct?

20 A. That's correct.

21 Q. Okay. Do you receive any money for the
22 work that you do on those studies, or is it just what
23 you get paid at Duke?

24 A. It's what I get paid at Duke.

25 Q. Okay. So I think you mentioned that

1 the -- the current update you're doing to the Tufts
2 Drug Development Cost Study was suggested by Pfizer
3 and is being -- is being funded by Pfizer, correct?

4 A. Yes, but independently.

5 Q. Independently. Yeah. You're
6 independently running the study?

7 A. Right. Pfizer has not made any comments
8 or . . .

9 (Exhibit 10 was marked for identification.)

10 BY MS. SUTTON:

11 Q. Okay. Exhibit 10 is one of your cost
12 studies that was published in 2016. I think that's
13 the one where you estimate that the cost of drug
14 development -- the cost of developing a new drug was
15 just under 2.6 billion. I think that's published in
16 this study?

17 A. Yes.

18 Q. Okay. Did -- did any -- who -- who
19 suggested that you do this study?

20 A. Tufts director Ken Kaitin felt that we
21 should update it, because it had been ten years since
22 the last study, and that we would reach out and get
23 participation from, you know, firms, and do a
24 representative sample of projects at various stages
25 of development.

1 So it was essentially the Tufts group
2 decided we -- we should do an update of our prior
3 studies using similar methodology.

4 Q. So the prior study that you referenced,
5 the one that you had done ten years earlier, was that
6 study suggested to you by any pharmaceutical company?

7 A. I don't believe so.

8 Q. Do you know who suggested that you do that
9 earlier study?

10 A. Well, there was a line of research going
11 way back in time on the cost of new drug development.
12 And the first study was actually -- in this series
13 was done at Rochester by Ronald Hansen. And there
14 was, you know, I think Lou Lasagna, who was a
15 prominent epidemiologist who headed the center before
16 it was -- the CSDD, in modified form, was at
17 Rochester.

18 And Hansen was commissioned to do -- by
19 the CSDD to do a more rigorous study than what --
20 there were numbers floating around in the literature
21 that were based very loosely on, you know, limited
22 data and other studies. And I think Lasagna felt
23 that it would be a major -- some major contribution
24 to really do a more rigorous study, and Hansen was
25 the professor at Rochester who was asked to perform

1 this.

2 And then Hansen came out with a study that
3 was much more rigorous and comprehensive than any
4 research to date. And then the center got lots of
5 citations for this. I mean, we are -- our -- Journal
6 of Health Economics is the most respected health
7 economics journal peer-reviewed, and I think we have
8 more citations than any other single article.

9 Q. On this topic?

10 A. Yes.

11 Q. Okay. So that -- the earlier study that
12 you were referencing by Hansen, were you a coauthor
13 on that as well?

14 A. No, that was just Hansen by himself.

15 Q. Okay. But it was -- it was a study that
16 was funded by CSDD? Or . . .

17 A. I don't know that for sure. It could have
18 been Hansen just -- he was a professor at Rochester.
19 He may have just used his own money to do it.

20 Q. And then is there a cost study that you
21 were an author on that's dated before Exhibit 10?

22 A. Yes.

23 Q. Okay. And was that a study that was
24 commissioned by the CS -- CDSS?

25 A. Yes, it was performed by CSDD, and I think

1 DiMasi did it as part of his regular faculty position
2 at Tufts.

3 Q. Okay. And you -- and you were coauthor,
4 along with Professor Hansen?

5 A. Yes.

6 Q. Okay. And was that -- did that study come
7 out in published form when you were on the board of
8 CSDD?

9 A. Let me see when it came out.

10 It came out in 2007, but I think by that
11 time the board was no longer.

12 Q. Okay. All right. So in this study in
13 Exhibit 10, there's a starred paragraph under the
14 "Introduction" paragraph. Do you see that? Where
15 you thank the survey firms for providing data?

16 I'm sorry. On the first page.

17 A. Yes.

18 Q. So my understanding of this study is that
19 pharmaceutical companies provided data to you.

20 A. Yes, although we selected the -- the
21 products, so we would get a representative sample.
22 And we also gave them a format, and we checked it,
23 and, you know, so there -- and we check -- in this
24 article, there are various checks from -- of the
25 internal data that we received with external data.

1 Q. And you surveyed I think ten different
2 pharmaceutical companies?

3 A. Yes.

4 Q. And you -- they provided data on 106
5 different drug molecules?

6 A. Yes.

7 Q. Okay. And the paper -- I think you said
8 that that information is proprietary, so did you not
9 disclose the -- the drug molecules that you studied?

10 A. That's correct.

11 Q. Okay. Did you disclose them by
12 therapeutic class?

13 A. Yes.

14 Q. Okay. And you didn't disclose the -- the
15 pharmaceutical companies that provided the data?

16 A. That's right, although we characterized,
17 you know, what percentage of the industry sales and
18 R&D and -- so we -- we characterized the sample and
19 tested that it would be representative, but we didn't
20 disclose the companies that provided the information.

21 Q. Were any of the drug molecules that you
22 studied opioid medications?

23 A. I don't know the answer. I would rather
24 doubt it, but -- because it's not -- it was not a
25 major class that we investigated, but -- only Joe

1 DiMasi knows the exact molecules.

2 Q. Okay. And there's never been any
3 publication that describes the molecules that you
4 studied or the pharmaceutical companies from which
5 you got the data, correct?

6 A. Only by therapeutic class.

7 Q. Okay. All right. Okay. You can set that
8 aside.

9 I tried to shorten up over lunchtime,
10 because we talked about some of the topics already.
11 But I think you acknowledged before lunch that --
12 that you have published articles in the academic
13 literature that have received funding from
14 pharmaceutical companies, correct?

15 A. Yes.

16 Q. Okay. And the Duke program in
17 pharmaceutical and health economics that you're the
18 director of, you have received support from PhRMA,
19 the organization called PhRMA, correct?

20 A. I think so, but it -- I think it was not a
21 primary source of revenue.

22 Q. Right. But they have funded some of
23 the -- the studies that have come out of the Duke
24 program in pharmaceutical and health economics,
25 correct?

1 A. Yes.

2 Q. Okay. Do they ever --

3 A. These have always -- let me add --

4 Q. Yes.

5 A. -- been peer-reviewed.

6 Q. Oh, true. Sorry. Thank you for that
7 clarification.

8 So when PhRMA has supported your work
9 through grants, do they -- have they ever done more
10 than just provide money? Do they provide you other
11 types of support beyond financial support?

12 A. I don't --

13 MR. MORRIS: Objection to form.

14 THE WITNESS: I'm not sure what you're
15 referring to.

16 BY MS. SUTTON:

17 Q. I can rephrase it.

18 Has PhRMA provided you data for use in the
19 studies that are -- that come out of the Duke program
20 in pharmaceutical and health economics?

21 A. They've provided data or allowed us --
22 part of the funds were used to purchase data from
23 IQVA and IMS and -- and all, but they've never
24 provided internal data.

25 Q. Okay. Do they ever provide you with any

1 staff to assist you in your studies?

2 A. No.

3 Q. Okay. Do they ever -- does PhRMA ever
4 review drafts of your papers before they're
5 published?

6 A. At the very end, we sometimes -- not
7 always, but sometimes we'll say "This is ready for
8 publication. Do you want to read it over and see if
9 we have made any errors that you could see?"

10 And sometimes they make suggestions and we
11 take them under advisement. Most of the time we
12 don't make any changes.

13 Q. Okay. Do they ever assist with your
14 collection of data?

15 A. Only from publicly available sources, like
16 IMS.

17 Q. Okay. All right. So moving into -- I'll
18 talk a bit about your past testimony as an expert.

19 How did you decide you wanted to become an
20 expert in litigation? Expert witness?

21 A. Well, I was a professor working on the
22 economics of pharmaceuticals, and companies asked me
23 if I could provide testimony on particular issues,
24 and I said, "Well, if it relates to my research, I --
25 and I have the time to do it, I -- I will consider

1 it."

2 Q. And when did you first testify as an
3 expert in litigation?

4 A. I think that -- those were the 1980's DES
5 cases involving long-tail liability of daughters that
6 had a problem with mothers who took DES.

7 Q. And who hired you there?

8 A. Bristol-Myers Squibb.

9 Q. Okay. And do you remember the law firm?

10 A. It was a couple law firms, but one was out
11 of Boston, and one was out of California. A smaller
12 law firm.

13 Q. Okay. And you don't recall the names?

14 A. You know, maybe by the end of the
15 testimony I might recall it.

16 Q. Okay. Do you have any estimate of how
17 many hours you would have put into that expert work
18 in the 1980s?

19 A. Well, I was only charging a few hundred
20 dollars an hour in those days. And these cases
21 spanned three phases, five years, multiple
22 defendants, multiple plaintiffs, the -- you know,
23 certainly at least a few hundred hours. Maybe more.

24 Q. Okay. And then did you -- did you just
25 give deposition testimony, or did you do trial

1 testimony?

2 A. I gave deposition and trial.

3 Q. Okay. Where was the trial, in California?

4 A. San Francisco, yes.

5 Q. Okay. Any other testimony in the '80s
6 that you can recall?

7 A. I testified for Genentech in a case
8 involving a human growth hormone and a company -- it
9 was a patent litigation, I think.

10 Q. Okay. And you were hired by Genentech?

11 A. Yes.

12 Q. Okay. And was the defendant a
13 pharmaceutical company as well?

14 A. Yes.

15 Q. Okay. Do you have any idea how much time
16 you would have spent on that case?

17 A. Maybe 100 hours.

18 Q. Okay. And do you remember which law firm
19 hired you?

20 A. Yes. Fish & Richardson.

21 Q. Okay. Yeah, I know them. I used to be a
22 patent lawyer, back in the day.

23 So anything else from the '80s that you
24 remember with respect to expert testimony?

25 A. No.

1 Q. Okay. Now, moving into the '90s, I -- I
2 think you've testified -- well, did the human growth
3 hormone ITC litigation go into the '90s?

4 A. Yes.

5 Q. Okay. So we've talked about that. Do you
6 remember any other cases in the 1990s?

7 A. Not off the top of my head.

8 Q. Okay. So how many times in your career do
9 you think you've been hired as an expert witness?

10 A. You know, over -- let's see. The '80s are
11 what, 30 years ago?

12 Q. Mm-hmm.

13 A. And so it's been more than 35 years. And
14 I've testified between -- early days, maybe two times
15 a year, and then it -- when I became emeritus, it's
16 more. Maybe four or five times a year.

17 And so -- you know, I don't know. Do a
18 rough thing: Maybe I've testified 50 times over
19 35 years, something like that. At least 50 times,
20 maybe.

21 Q. Yeah. I've been trying to add it up, and
22 it looks to me like you've been an expert witness at
23 least 70 times. Does that sound like that could be
24 possible?

25 A. Yes.

1 Q. Okay. And that's something you probably
2 could go back and look up if you had to. You could
3 figure it out, right? Maybe?

4 A. I could look at the records since maybe
5 2000. I don't think I saved anything from the '90s.

6 Q. Okay. So is it fair to say that your
7 expert testimony is generally always on behalf of a
8 pharmaceutical company?

9 MR. MORRIS: Objection to form.

10 MS. SUTTON: I can strike that. I'll do a
11 better question.

12 BY MS. SUTTON

13 Q. Is it fair to say that your expert
14 testimony is generally on behalf of pharmaceutical
15 companies?

16 A. Generally, but not exclusively.

17 Q. Who else have you testified besides
18 pharmaceutical companies?

19 A. Well, I testified for plaintiffs in a
20 limited funds case in Cincinnati, where, you know,
21 the biotech firm that invented fen-phen was a
22 relatively small startup, and they licensed this to a
23 bigger pharm, and they started -- the fen-phen
24 litigation started to be so costly that they were
25 going bankrupt.

1 So they petitioned the court to, you know,
2 instead of -- this company could get out of the
3 litigation by giving a lot of their assets to the
4 plaintiffs or rights to the plaintiffs. And I was
5 assigned to try to evaluate, you know, what their
6 drugs that were in different stages of development
7 were worth.

8 Q. Right. Other than that case, have you
9 acted as an expert witness for companies other than
10 pharmaceutical companies?

11 A. For chemical companies once.

12 Q. Once. Okay. Is it fair to say that the
13 vast percentage of your expert work has been on
14 behalf of pharmaceutical companies?

15 A. But generally companies versus other
16 companies.

17 Q. Against other pharmaceutical companies?

18 A. Yes.

19 Q. Right. So would it be fair to say that
20 more than 95 percent of the cases where you've acted
21 as an expert, you've -- you've been hired by a
22 pharmaceutical company?

23 A. I don't know if 95 percent, but . . .

24 Q. Over 90?

25 A. Maybe.

1 Q. Okay. Can you identify -- you mentioned a
2 chemical company case, this fen-phen matter. Are
3 there any other cases that come to mind where you
4 weren't an expert on behalf of a pharmaceutical
5 company?

6 A. I was hired by the Department of Justice
7 in a case, and -- it was an antitrust case.

8 Q. Was it involving the pharmaceutical
9 industry?

10 A. No.

11 Q. Okay. Something else. Okay.
12 Anything else?

13 A. You know, I'm sure there are other cases.
14 I'd have to go back and think about them.

15 Q. Okay. We're going to look at some lists
16 of cases, too, to the extent I was able to find lists
17 of cases where you had testified.

18 So over the course of your professional
19 career, how many hours do you think you've dedicated
20 to your expert work?

21 A. Over 35 years?

22 Q. Yeah, I know -- big question. But do you
23 have a way to approximate it?

24 A. Not really. Not -- it would be
25 speculative, I think.

1 Q. Would it -- would it be in the thousands
2 of hours?

3 A. It could be in the thousands, yes.

4 Q. Could it be in the tens of thousands?

5 A. I don't think so.

6 Q. Okay. We talked earlier about, that you
7 went emeritus status at Duke, I think in 2009, and
8 now your salary is 5,000 a month from the -- the
9 center that you run, correct?

10 A. Yes.

11 Q. Okay. Prior to 2009, you were a professor
12 teaching courses at Duke, correct?

13 A. Right.

14 Q. And what was your salary when you were
15 acting professor, or a professor teaching classes,
16 before you went emeritus?

17 A. About 125,000.

18 Q. Okay. And I think you -- your report says
19 that your hourly rate in this case is \$800 per hour.
20 And how long have you been charging \$800 an hour? Do
21 you recall?

22 A. I don't know. Half-dozen years.

23 Q. Okay. Sometimes experts have different
24 rates that they charge for trial versus deposition
25 testimony. Do you have a -- different rate scales?

1 A. No.

2 Q. Okay. Do you have any idea how much
3 you've made over your career serving as an expert
4 witness?

5 A. No.

6 Q. Okay. Do you -- could you estimate that
7 you've -- you've made millions of dollars?

8 A. I don't think so.

9 Q. Do you think you made over a million?

10 A. Yeah, over 35 years, I probably made a
11 million.

12 Q. Okay. Now, I want to show you . . .
13 (Exhibit 11 was marked for identification.)

14 BY MS. SUTTON:

15 Q. So this is a -- a copy of a CV that I --

16 MR. WILSON: John, I can trade you with
17 one that's clipped.

18 MR. MORRIS: Yeah. Because I got a
19 Post-it Note, too. I wrote the exhibit number
20 on there.

21 BY MS. SUTTON:

22 Q. This is a copy of a CV that I found, filed
23 in the -- in the docket of the case matter. And you
24 can see at the top it says "Case 2:05-CV-05727." Do
25 you see that?

1 A. Yes.

2 Q. And I'll just -- can just show you, that
3 case number relates to Eisai Company versus Teva. Do
4 you recall that case?

5 A. Yes.

6 Q. Here. I can give that to you to confirm.

7 MR. WILSON: That's not been marked. Do
8 you need to mark it?

9 MS. SUTTON: I was just showing it to
10 refresh his recollection that that's -- the case
11 file on the CV relates to this matter.

12 THE WITNESS: Oh. So I'm not sure -- I've
13 done a few cases for Eisai. I don't know
14 exactly which one this is.

15 BY MS. SUTTON

16 Q. Right. Well, the reason I was showing you
17 is the -- the docket number on this case is the same
18 docket number that appears on top of your CV.

19 A. Okay.

20 Q. Okay. So it was just to refresh your
21 recollection that this CV was submitted in the Eisai
22 versus Teva case.

23 And so if you look -- the CV was submitted
24 on February 2008. And if you go to the very back
25 page, Appendix 2. Do you see that?

1 A. Yes.

2 Q. There is a listing of cases where you had
3 testified since 2003. So it begins in December of
4 2003, and it goes through August 2007. Do you see
5 that?

6 A. Yes.

7 Q. Do you have any reason to believe that
8 this isn't an accurate list of your testimony during
9 this time period?

10 A. It looks accurate.

11 Q. Okay. And I counted up that there are
12 13 cases listed here where you acted as an expert
13 witness from December 2003 to August 2007. Does that
14 look correct?

15 A. Yeah, although some of these cases are the
16 same product, with multiple generics, and so the --

17 Q. Right.

18 A. -- the follow-on cases involved much less
19 work than the original.

20 Q. Right. But they're all separate cases,
21 though, correct?

22 A. Yes.

23 Q. Okay. And it appears when I'm looking at
24 this list that a pharmaceutical company was involved
25 in each of the cases, correct?

1 A. Yeah, although I'm not sure -- New River
2 Pharma versus D -- you know, I think those were
3 suppliers rather than manufacturers.

4 Q. Okay. Do you -- rather than going through
5 each one of these, did you -- can you tell me, were
6 you generally on the side of the plaintiff or the
7 defendant in these cases? Or do we need to go one by
8 one?

9 A. For the plaintiff.

10 Q. Okay. And did these cases involve -- did
11 all these cases on this list involve patent disputes?

12 A. New River I think was a contractual
13 dispute. Elan Pharm king, was definitely a
14 contractual dispute. State of Colorado versus Warner
15 Chilcott was some kind of antitrust, I think.

16 Q. And who did you testify on behalf of in
17 that case?

18 A. Warner Chilcott.

19 Q. Okay. And then the last case, do you
20 think that was an antitrust case as well?

21 A. Yes.

22 Q. Okay. And there you were also testifying
23 on behalf of Warner Chilcott, right?

24 A. Right.

25 Q. And they're in the pharmaceutical

1 industry, correct?

2 A. Yes.

3 Q. Okay. So do you recall, for any of these
4 cases, which law firms may have hired you?

5 A. Well, we saw on this one, Bruce Wexler
6 hired me -- you showed me something, but Bruce was
7 with --

8 Q. Eisai?

9 A. The Eisai case. He was with -- let's
10 see -- Paul Hastings. You know, I did cases with
11 Paul Hastings.

12 Q. Mm-hmm.

13 A. I did some cases with Finnegan. And you
14 know, they're, as you're aware, patent specialists.
15 And -- Fish & Richardson.

16 There was another one in D.C. that -- I
17 did work with Williams & Connolly.

18 Q. Right. I know you're aware that Williams
19 & Connolly represents a defendant in this case?

20 A. No.

21 Q. They represent Cardinal Health, one of the
22 distributors.

23 A. Okay.

24 Q. So in the patent cases, is there a way to
25 generalize the opinion? Because you said a lot of

1 these cases were -- were follow-on. Is there a way
2 to generalize the type of opinion you would give in
3 these patent cases?

4 A. Yeah, they were --

5 MR. MORRIS: Objection to form.

6 THE WITNESS: Either the general -- you
7 know, one of the issues is nonobviousness, and
8 one of the metrics to look at nonobviousness is
9 commercial success. And that's what I was
10 generally hired to be, a net analyst of
11 commercial success, and the links to the patent.

12 So that's many of these. Sometimes there
13 would also be a petition for a preliminary
14 injunction, and then it would be irreparable
15 harm.

16 BY MS. SUTTON

17 Q. Okay. Do you have any idea for this
18 four-year -- basically this time period that's set up
19 on December 2003 to August 2007, how much time you
20 would have spent on this expert work?

21 A. Well, I was teaching, so, you know, I
22 limited my time.

23 Most of these cases were settled. I see
24 only one that went to trial. Some of them were
25 arbitration, which took less work than some of the

1 other cases. I always had assistants from either
2 Brattle, Analysis Group, or Cornerstone in virtually
3 all these cases, or sometimes a -- a person that was,
4 you know, a one-man band, so to speak, actually in
5 Minneapolis. He assisted me -- but I always had
6 support to do number-crunching and different things,
7 so . . .

8 Q. What was the guy's name -- did you mention
9 someone in Minneapolis?

10 A. Oh, Frank Lehrman.

11 Q. Oh, okay.

12 A. He's in Minneapolis now because his wife
13 works for a Minneapolis firm. He was one for Brattle
14 I think.

15 Q. So looking at, for example, Pfizer versus
16 Teva cases, where you gave trial testimony: Do you
17 have any idea how much time you would have devoted to
18 that matter?

19 A. Not off the top of my head. You know,
20 over this whole period, I would say my time -- my
21 billings were much more limited in hours as well as
22 what I was charging.

23 Q. Is that in part because you were a
24 professor teaching courses at Duke --

25 A. Yes.

1 Q. -- during this time period?

2 A. Yes.

3 Q. But beginning in 2009, when you went
4 emeritus status, you had more time to devote to your
5 expert work?

6 A. Yes.

7 Q. Okay. So do you remember if any of
8 these -- I'm sorry. Going back to that -- if in any
9 of the cases listed on this exhibit whether or not
10 your opinion or any part of your opinion was excluded
11 by the courts?

12 A. I don't think my opinion's ever been
13 excluded.

14 Q. Okay. So you don't believe that your
15 expert opinion has ever been excluded in any case
16 where you've served as an expert?

17 A. That's correct.

18 Q. Okay. So this list just started in
19 December of 2003, and we talked a little bit about
20 the '90s. Are there any other cases that you
21 could -- that prior to 2003 that aren't listed here,
22 that we -- that we haven't discussed?

23 A. So, you know, I think there would be
24 fairly -- relatively few in the '90s, because after
25 this major case, the DES cases took a lot of time.

1 At that time I was director of graduate studies, so I
2 had a major administrative job. The case went on for
3 five years and had three different phases, so I
4 wanted a break from testifying.

5 The case got brought up again in New York,
6 and in both cases, my market share analysis was
7 accepted by the judge as the basis for allocating
8 funds to plaintiffs And so that New York case was
9 probably in the '90s.

10 Off the top of my head, I can't think of
11 others, but there may have been a few.

12 Q. Okay. All right. Let me show you
13 another.

14 (Exhibit 12 was marked for identification.)

15 BY MS. SUTTON:

16 Q. I'm going to show you a document that's
17 been marked as Exhibit 12. This is a CV from 2010
18 that we obtained off Lexis.

19 And does this appear to be a CV of yours?

20 A. Yes.

21 Q. Okay. Then if you go to page 12 of 13,
22 which is at the back, Appendix 2, you'll see that
23 there's a list of testimony, beginning December 2003,
24 running through January of 2009. Do you see that?

25 A. Yes.

1 Q. Okay. So I think -- we don't have to go
2 through all these, because some of these overlap with
3 the last one that we looked at. The last testimony
4 that was disclosed on Exhibit 11 was the Meijer
5 versus Warner Chilcott. Do you see that, on the --
6 on page 13?

7 A. Yes.

8 Q. Okay. So just -- just focusing, then, on
9 everything below the Warner Chilcott case, starting
10 with Roche Palo Alto. So this discloses deposition,
11 trial testimony in March and December of 2008. And
12 then the list runs through January of 2009. So it's
13 basically a listing of less than a year time period.
14 Correct?

15 A. In terms of actual deposition, yes.

16 Q. Right. So if we look here, there are --
17 let's see; one, two, three, four, five, six -- seven
18 cases that you did between March 2008 and
19 January 2009, correct?

20 A. Yes.

21 Q. And again, it looks like all the cases
22 here involve pharmaceutical companies.

23 A. Yes.

24 Q. Okay. And is it fair to say that in each
25 of these cases, you've been retained as an expert by

1 a pharmaceutical company?

2 A. Yes.

3 Q. Okay. Do you recall any of the law firms
4 that had hired you?

5 A. I think some of these would be the same
6 ones I had mentioned earlier.

7 Q. Okay. Do you recall in the Wyeth versus
8 Lupin Limited case, you were hired by Arnold &
9 Porter?

10 A. I don't recall that, but it -- it could be
11 true.

12 Q. Okay. Were these -- were the cases that
13 are listed here, starting with the Roche Palo Alto
14 down to the Wyeth v. Apotex, were they mostly patent
15 cases?

16 A. Yes.

17 Q. And again, the opinion -- opinions that
18 you were giving, were they similar to the opinions
19 you gave in other patent cases, or where they -- is
20 your opinion different in these cases, many of which
21 are involving generics?

22 A. Are they generally similar? I mean, I try
23 to develop metrics of commercial success, and then I
24 tend to look at whether there's a link to the patent.

25 Q. Okay. So can you just -- without having

1 an extended discussion, what were some of the metrics
2 for commercial success that you would spell out in
3 your expert opinion?

4 MR. MORRIS: Objection to form.

5 THE WITNESS: You know, generally we would
6 look at -- and I would look at new and refilled
7 prescriptions to total prescriptions. I would
8 look at units, maybe extended units in some
9 cases. I might look at patient days. I would
10 look at market share in units and -- and
11 dollars. And where the data permitted, I would
12 look at return on R&D investment.

13 BY MS. SUTTON

14 Q. Did you ever conclude in any of these
15 cases that the branded pharmaceutical product was not
16 a commercial success?

17 A. Not in these cases. But I've had -- you
18 know, I've concluded that in other cases. And the --
19 you know, a lot of times I've been called and said,
20 "Could you serve as an expert," and they explained
21 it -- the company, the brand, sometimes the patent as
22 well, and I said "I don't think I can give you an
23 affirmative opinion." And then I wasn't hired.

24 Q. Okay. And so in most of these cases that
25 we went through on here, you've been hired by the

1 branded pharmaceutical company, correct?

2 A. Yes. And most of the products would be,
3 you know, very large commercial products.

4 Q. Right. So do you have any estimate from
5 this time period, beginning in March 2008 through
6 January 2009, how much time you would have spent
7 serving as an expert witness in these seven cases?

8 A. Maybe 50 hours a case. Some would be
9 more, some less.

10 Q. Okay. And during this time period, do you
11 know what your hourly rate was?

12 A. Maybe 500 an hour.

13 Q. Okay. And you -- your rate of 800, you
14 said it's been around for a half-dozen years?

15 A. That would be my estimate.

16 Q. Your estimate. Okay.

17 So -- just want to ask you about a few
18 other cases and see if you recall serving as an
19 expert. We already talked about the Eisai versus
20 Teva case, and you served as an expert in that case,
21 correct?

22 A. Yes.

23 Q. And you were an expert for Eisai?

24 A. Yes.

25 Q. Were you also an expert in -- in a case in

1 2006, Wyeth versus Impax Laboratories?

2 A. If it's on there, I -- I would guess -- if
3 it's on some of my list of expert testimony, then --
4 I don't recall the case, but . . .

5 Q. Have you served as an expert for Wyeth?

6 A. Yes.

7 Q. Okay. Have you -- did you serve as an
8 expert in a case called Harden Manufacturing versus
9 Pfizer, in 2008? And it was venued in Massachusetts.

10 A. I don't remember the name "Harden" at all.

11 Q. You have served as an expert for Pfizer,
12 though, correct?

13 A. Yes.

14 Q. And have you worked with -- in your
15 capacity as representing Pfizer as an expert, have
16 you been hired by Mark Cheffo at Skadden Arps?

17 A. I've done work for Skadden Arps, but I
18 don't recall that case, or testifying.

19 Q. Okay. And so you don't recall
20 testifying -- providing an expert report in Harden
21 Manufacturing versus Pfizer, then?

22 A. That's correct.

23 Q. Okay. Do you recall providing a
24 declaration in 2009 in a case, Hoffmann-La Roche
25 versus Apotex?

1 A. I recall doing some cases for
2 Hoffmann-La Roche, but I don't recall the details.

3 Q. But you do recall being an expert for
4 Hoffmann-La Roche?

5 A. Yes.

6 Q. Okay. Do you recall a case in Indiana,
7 from 2009, where you provided a declaration
8 entitled -- the case was captioned Eli Lilly versus
9 Teva?

10 A. I recall doing a case for Lilly
11 involving -- I think it was a -- one of their
12 commercially successful drugs.

13 Q. So you do recall being a -- serving as an
14 expert for Eli Lilly?

15 A. Yes.

16 Q. Okay. Do you recall serving an expert
17 report in a case between Novartis versus Teva in New
18 Jersey in 2009?

19 A. No.

20 Q. Do you recall ever serving as an expert
21 for Novartis?

22 A. Yes.

23 Q. Okay. And you do recall being in
24 litigation where Teva was on the other side, I
25 believe, correct?

1 A. Yes.

2 Q. Okay. Do you recall submitting an expert
3 declaration in the case Sanofi-Aventis versus Sandoz,
4 in 2009, in New Jersey?

5 A. No.

6 Q. Okay. Have you served as an expert for
7 Sanofi-Aventis?

8 A. Yes.

9 Q. Okay. Do you recall serving an expert
10 report in a case entitled Bayer Schering Pharma
11 versus Teva Pharmaceuticals, in 2009, in the District
12 of Delaware?

13 A. No.

14 Q. Have you served as an expert or been
15 retained by -- to be an expert by Bayer?

16 A. Yes.

17 Q. Okay. And have you been hired by
18 Williams & Connolly to serve as an expert?

19 A. Yes.

20 Q. Okay. And you don't recall Williams &
21 Connolly being involved in the Bayer Schering versus
22 Teva case?

23 A. Did it go to trial, or . . .

24 Q. Expert report --

25 A. No.

1 Q. -- is all I'm aware of. Okay.

2 Sorry, it's a memory test.

3 MS. SUTTON: Okay. If you can mark this.

4 (Exhibit 13 was marked for identification.)

5 BY MS. SUTTON

6 Q. Exhibit 13 is a reply declaration Henry
7 Grabowski, Ph.D., submitted in the Janssen Biotech
8 and NYU versus Celltrion Healthcare matter, in 2015.
9 Do you recognize this document?

10 A. Yes.

11 Q. And do you know which side you were hired
12 by?

13 A. Yes. Janssen.

14 Q. Okay. If you turn to Exhibit B, which is
15 very near the end.

16 MR. MORRIS: While he's going there, this
17 one is marked "Highly confidential, filed under
18 seal," but there are redactions. Is this the
19 non-under-seal version?

20 MS. SUTTON: Yes.

21 MR. MORRIS: I just need to know whether
22 or not I need to do something about this.

23 MS. SUTTON: No. It was --

24 MR. MORRIS: Okay.

25 MS. SUTTON: It's publicly available.

1 MR. MORRIS: Okay. Thank you.

2 MS. SUTTON: You're welcome. I was not
3 involved in this case. I know that.

4 MR. MORRIS: Okay.

5 MS. SUTTON: No access to anything under
6 seal.

7 BY MS. SUTTON:

8 Q. Do you see Appendix B?

9 A. Yes.

10 Q. Okay. So that -- this appears to provide
11 a list of cases where you've acted as an expert for
12 four years prior to the date of the expert report.
13 And if you see the expert report on page 16 is dated
14 May 20th, 2015?

15 A. Yes.

16 Q. So -- okay. So this is -- this would
17 appear to be, then, a list of cases where you had
18 served as an expert between the time period of
19 May 20th, 2011, to May 20th, 2015. Does that seem
20 correct?

21 A. Yes.

22 Q. Okay. So at this time now you're a
23 professor emeritus at -- at Duke, correct?

24 A. Yes.

25 Q. It appears -- I counted these. It appears

1 that there are 20 cases listed here where you -- on
2 these two pages -- where you acted as an expert.

3 A. Yes, with the same caveat, that many of
4 them are really the same report, just updated a
5 little to a new generic challenger.

6 Q. And it looks like a number of these cases
7 involved not only deposition, but at-trial testimony?

8 I think there are six -- six of the
9 20 cases, you gave not only a deposition but at-trial
10 testimony.

11 A. Yes.

12 Q. Okay. Generally, when you would testify
13 at these trials, how much time would go into the
14 preparation, being at trial and testifying at trial?
15 Is there a way to generalize?

16 A. It varies. Some cases it was like -- you
17 go to Delaware, most of them are in Delaware, some in
18 New York, and two days before the trial, and you go
19 on -- I'm often the last witness, because the
20 commercial success comes at the end.

21 And other cases you might be there a
22 little longer. You generally have, you know, a
23 web-based trial prep before you went to Delaware.
24 So, you know, it could be three or four full days,
25 30 hours of --

1 Q. Right. And then you also would have
2 additional time getting ready for your deposition and
3 sitting for your deposition, correct?

4 A. Yes.

5 Q. And then in most of these cases, there
6 would also have been an expert report that would have
7 been provided?

8 A. Yes.

9 Q. And there would be time spent on putting
10 the expert report together as well, correct?

11 A. Yes.

12 Q. And -- and during this time period, would
13 your hourly rate be in the 750-to-800-dollar range?

14 A. I think so.

15 Q. Okay. And most of these cases -- or --
16 strike that.

17 Are all of these cases that are listed in
18 Appendix B patent cases?

19 A. No.

20 Q. Okay. Which ones are not?

21 A. So the arbitration hearing, which has
22 three dates --

23 Q. Mm-hmm.

24 A. -- is a contractual dispute. I think the
25 rest would be patent disputes.

1 Let me clarify. Like in regard --
2 Gabapentin, it's patent litigation, but it's entry at
3 risk rather than commercial success.

4 Q. So in that type of case, what generally
5 would your expert opinion be?

6 A. This was a jury trial. Teva I think
7 entered at risk. And on appeal, the patent was
8 upheld. And so I was sort of telling the jury what
9 it normally would take to produce a new drug, and how
10 much innovators spend in related -- related issues to
11 the innovation process.

12 Q. So kind of similar to some of the academic
13 work we looked at earlier, where you studied the --
14 the cost of drug development?

15 A. Right. But I also looked at the specifics
16 of this the drug.

17 Q. Correct. Okay.

18 So this is -- in these 20 matters, over
19 this time period from September 2010 to January 2015,
20 is there a way for you to estimate -- or can you
21 estimate how many hours you would have spent on this
22 expert work?

23 A. Not really.

24 Q. Other than the information you provided
25 before about generally how much time you would spend

1 at a trial where you testified?

2 A. Right.

3 Q. Okay. All right. So -- and do you have
4 any recollection of the law firms that would have
5 hired you in these cases listed in Appendix B?

6 A. I mean, I think it's some of the same law
7 firms. I did several cases with Williams & Connolly,
8 but I couldn't say which ones here. I did work with
9 Paul Hastings. I did work with Finnegan.

10 Those are the ones I could think of off
11 the top of my head.

12 Q. Okay. Thank you.

13 Do you recall -- we're done with that.
14 You can put that aside.

15 Do you recall testifying as an expert in a
16 matter called Smith v. Pfizer in 2010, where you had
17 been hired by Skadden Arps?

18 A. No.

19 Q. Okay. So you don't recall anything about
20 that matter?

21 A. No.

22 Q. But you have served as an expert to Pfizer
23 in the past, correct?

24 A. Yes.

25 Q. Okay. Do you recall giving trial

1 testimony in October 2010 in a case in the Eastern
2 District of Texas between Pozen Inc. and Par
3 Pharmaceutical?

4 A. Yes.

5 Q. Okay. And what -- do you know what type
6 of case that was?

7 A. That was a patent dispute.

8 Q. That's the rocket docket, Eastern District
9 of Texas?

10 A. That's right. That's my first time down
11 there.

12 Q. Okay. And were you -- which party did you
13 testify on behalf of?

14 A. Pozen.

15 Q. Okay. And what kind of company is Pozen?

16 A. Pozen was a small company, and I don't
17 think they exist anymore, but they were headquartered
18 in Chapel Hill, and they did combination drugs.

19 Q. Okay. Do you -- do you work -- have you
20 ever worked on behalf of Par Pharmaceutical -- well,
21 you work on behalf of Par Pharmaceutical in this
22 case, correct?

23 A. Yes.

24 Q. Okay. But on that case, you were opposed
25 to them?

1 A. Right.

2 Q. Okay. Do you recall giving trial
3 testimony in Eli Lilly versus Teva in Delaware in
4 2010?

5 A. There was -- I'm not sure it's this case,
6 but I remember doing a Lilly case in front of Judge
7 Sleet, where he ruled from the bench in favor of
8 Lilly. So that could be this case.

9 Q. Okay. Do you think that was the case
10 where Williams & Connolly were your attorneys?

11 A. Yes.

12 Q. Okay. All right.

13 Now, if we can go back in your stack to
14 your expert report, which I think is Exhibit
15 Number 2, it should be in there. It's Depo
16 Exhibit 2, and we're going to look at Appendix 2.

17 MR. MORRIS: Counsel, when you get to a
18 stopping point --

19 MS. SUTTON: Yeah.

20 MR. MORRIS: -- could we take a restroom
21 break, when you get a chance?

22 MS. SUTTON: Yeah. If you want to take
23 one now, we can, and then I could just -- I'm
24 getting close to being done, and I -- we can go
25 off the record.

1 VIDEOGRAPHER: Going off the record. The
2 time is 2:26 p.m.

3 (A recess transpired from 2:26 p.m.
4 until 2:44 p.m.)

5 VIDEOGRAPHER: Going back on the record.
6 The time is 2:44 p.m.

7 BY MS. SUTTON:

8 Q. Professor Grabowski, before we left for
9 the break, I had asked you to pull out your
10 Appendix 2 from your expert report --

11 A. Yes.

12 Q. -- served in this case.

13 Do you have that in front of you?

14 A. Yes.

15 Q. Okay. And then -- I don't know if you
16 still have Exhibit 13 before you, the last exhibit.
17 I was just going to use it as a placeholder to show
18 you where we left off.

19 If you can go to the second page of
20 Appendix B.

21 A. Okay.

22 Q. The last case that's listed in Exhibit 13,
23 of cases where you provided expert testimony is the
24 Alcon Research versus Mylan Pharmaceuticals case, in
25 January 2015. Do you see that?

1 A. Yes.

2 Q. And then if you turn back to your expert
3 report, Appendix 2, you can see that that -- that
4 that case is listed on the second line in your
5 current expert report. So what I want to do is just
6 focus on the cases below that case, below Alcon
7 Research and Mylan Pharmaceuticals, because these are
8 cases we haven't talked about yet. Correct?

9 A. Yes.

10 Q. Okay. So Appendix 2 covers the four years
11 prior to when you served your expert report, which is
12 on May 10th, 2019. So this list goes back from
13 May 2019 to May 2014. But I just want to look at the
14 cases starting with the Sanofi-Aventis versus Eli
15 Lilly in June 2015 forward, because we haven't spoke
16 about that.

17 And if you -- I counted them up; it looks
18 like you have, since that case in June of 2015, you
19 have served as an expert witness in 18 cases total.
20 Does that sound right?

21 A. Yes.

22 Q. And again, is it fair to say that in all
23 of these cases -- all of these cases involved
24 pharmaceutical companies?

25 A. Yes.

1 Q. And in each of these cases, 18 cases, did
2 you provide expert testimony on behalf of a
3 pharmaceutical company?

4 A. Yes, either a brand or a generic.

5 Q. Okay. Were all of these cases patent
6 disputes?

7 A. No.

8 Q. Okay. Which ones weren't?

9 A. State of Wisconsin versus Pfizer was not a
10 patent dispute. And Akorn versus Fresenius Kabi was
11 not a patent dispute.

12 Q. So the -- the State of Wisconsin case, did
13 you testify on behalf of Pfizer?

14 A. Yes.

15 Q. And what kind of case was that?

16 A. It was what's so-called AWP cases, where
17 the states used a discount off of AWP as a mechanism
18 of reimbursement, and they thought, you know, that
19 that was not the appropriate -- the AWP was not an
20 appropriate measure of wholesale prices.

21 Q. And what expert opinion did you give in
22 that case?

23 A. Well, Pfizer did not propulgate an AWP,
24 for one thing. They -- they gave a WAC price, which
25 was their wholesale acquisition cost. It was a

1 journal that figured out AWP mechanically, and -- and
2 I gave other opinions, but essentially contested the
3 State of Wisconsin's allegations and damage experts'
4 estimates.

5 Q. Are you still working on that matter?

6 A. No, it was settled, and Pfizer was happy
7 with the settlement.

8 Q. Okay. Then you also, I believe, mentioned
9 that the Akorn versus Fresenius was not -- or excuse
10 me. I had that wrong. There was another case you
11 listed that didn't involve a patent?

12 A. Yes. It was the Akorn case.

13 Q. Okay. Versus Fresenius?

14 A. Yes.

15 Q. And what type of case was that?

16 A. That was in front of a chancery judge in
17 Delaware. Basically Fresenius had made an offer to
18 take over Akorn subject to certain constraints or
19 contingencies. And at some point Akorn's stock fell,
20 and they wanted to get out of the merger or the
21 acquisition, and it went to court, in chancery court.

22 Q. Okay. And which party did you represent
23 in this matter?

24 A. Akorn.

25 Q. Okay. And Akorn is a pharmaceutical

1 company?

2 A. Yeah. I mean, these were two generics.

3 Q. Right. Do you recall, from this list of
4 18 cases, any of the law firms that retained you?

5 A. I think in the Santofi-Lilly case, I think
6 that was Gibson Dunn.

7 Q. Mm-hmm?

8 A. Eisai versus Novartis, that could have
9 been Paul Hastings.

10 Q. Right.

11 A. There were two Teva cases where I
12 testified for them, in Houston and -- that was a
13 Boston firm that was often on the other side, but --
14 you know, their name slips my mind right now.

15 Q. It was a Boston firm that hired you?

16 A. No, that -- yes, that hired me, yes, in
17 those cases.

18 Q. In the Pfizer versus Fresenius case, were
19 you hired by Williams & Connolly?

20 A. Possibly.

21 Q. You just don't recall?

22 A. Right.

23 Q. Okay. And then the Bayer versus Mylan
24 case, which is on the second page, were you
25 representing Bayer there?

1 A. Yes.

2 Q. And were you again hired -- or excuse
3 me -- were you hired by Williams & Connolly?

4 A. I believe so.

5 Q. Okay. And then on this list, second from
6 the bottom, there's Alcon Research versus Watson
7 Labs. Do you see that?

8 A. Yes.

9 Q. And who were you hired by?

10 A. I think that was Williams & Connolly.

11 Q. And on behalf of whom?

12 A. Alcon.

13 Q. Okay. All right. So I'm just focusing on
14 the cases where you testified in 2018. So I think it
15 would start with the Galderma case versus Amneal.

16 It looks like you gave a trial testimony
17 in February of 2018. Correct?

18 A. Yes.

19 Q. And then in the next case, the Sanofi
20 versus Merck case, you gave a deposition in
21 April 2018 and trial testimony in May of 2018,
22 correct?

23 A. Yes.

24 Q. And then in the Akorn case, you gave a
25 deposition in June of 2018, correct?

1 A. Yes.

2 Q. And then in the Alcon Research versus
3 Watson Lab case, you gave a deposition in July of
4 2018. Do you see that?

5 A. Yes.

6 Q. And then in the Galderma case versus Sun
7 Pharmaceuticals, you gave a deposition in October of
8 2018 and trial testimony in December of 2018?

9 A. Right.

10 Q. So if you just add that up, it looks like
11 you gave, in 2018, three depositions, and you
12 testified at trial three times. Does that make
13 sense?

14 A. Yes.

15 Q. So -- and in some of these cases you may
16 also have been -- had time spent preparing expert
17 reports?

18 A. Right, although two of the cases are
19 redos, so to speak. Sanofi versus Merck Sharp &
20 Dohme was a case similar to Sanofi in a case
21 previously -- I don't know if it's on this list,
22 but -- yeah, versus Eli Lilly. They were both
23 challenging Lantus, a very prominent diabetes insulin
24 product. So the report was just updating the
25 metrics.

1 Q. Okay. But you did have to give
2 deposition -- three depositions and three trial
3 testimonies, correct?

4 A. Right. And Galderma was also a redo of an
5 earlier case.

6 Q. Okay. So -- and you also testified
7 earlier that you had just started to work in this
8 matter as well, correct?

9 A. Yes.

10 Q. And are there other cases that -- that you
11 are currently working on, in addition to the ones
12 that are listed here?

13 A. Yes, although I haven't been named in
14 them, there's two other cases. One of them's been
15 fairly dormant.

16 Q. Okay. So since 2018's pretty recent, can
17 you estimate how much income you received in your
18 capacity as an expert witness in 2018?

19 A. For these cases? Maybe 400 hours.

20 Q. Okay. And at your rate of \$800?

21 A. Yes.

22 Q. Okay. And that would have been
23 information -- your income from your -- your
24 testifying in 2018, you'd be able to figure that out
25 from looking at your income taxes, wouldn't you?

1 A. Yes, although they haven't been filed yet.
2 We took an extension.

3 Q. Ah. Okay. But you would have information
4 where you could put that number together for us,
5 couldn't you?

6 A. Yes.

7 Q. Okay. Thank you.

8 If you think it's about 400 hours at \$800,
9 that would be 320,000, correct?

10 A. Yes.

11 MS. SUTTON: Okay. I don't think I have
12 anything other -- or anything right now, unless
13 your counsel has a redirect; I might have a few
14 additional questions. But I want to thank you
15 so much for all your time and cooperation today.
16 I know this can be tedious, but I appreciate it.

17 MR. MORRIS: So I -- I don't have
18 anything, but I know that counsel for Janssen
19 wanted to say something before we went off the
20 record.

21 MS. MARCHITELLO: Yes. On behalf of
22 Janssen, I want to put on the record regarding
23 Exhibit 13, and the testimony thereon, that
24 Janssen reserves all rights to enforce all
25 applicable confidentiality agreements and the

1 protective orders that apply to that matter.

2 MS. SUTTON: And I have confirmed that
3 Exhibit 13 was obtained from Pacer Docket and is
4 publicly available, so there's nothing in the --
5 in Exhibit 13 that can't be obtained by anyone
6 who has a Pacer password.

7 MR. MORRIS: Okay. Again, I don't have
8 anything.

9 VIDEOGRAPHER: This is the end of the
10 video deposition. Time going off the record is
11 2:56 p.m.

12 (The deposition was concluded
13 at 2:56 p.m.)

14 (Signature reserved.)

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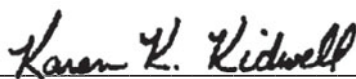
1 STATE OF NORTH CAROLINA
2
3 COUNTY OF MECKLENBURG

4 I, Karen K. Kidwell, RMR, CRR, in and for
5 the State of North Carolina, do hereby certify that
6 there came before me on Thursday, June 6, 2019, the
7 person hereinbefore named, who was by me duly sworn to
8 testify to the truth and nothing but the truth of his
9 knowledge concerning the matters in controversy in this
10 cause; that the witness was thereupon examined under
11 oath, the examination reduced to typewriting under my
12 direction, and the deposition is a true record of the
13 testimony given by the witness.

14 I further certify that I am neither attorney
15 or counsel for, nor related to or employed by, any
16 attorney or counsel employed by the parties hereto or
17 financially interested in the action.

18 This the 6th day of June, 2019.

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Karen K. Kidwell, RMR, CRR
Notary Public #19971050142

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ACKNOWLEDGMENT OF DEPONENT

I, HENRY GRABOWSKI, Ph.D., do hereby
certify that I have read the foregoing pages and that
the same is a correct transcription of the answers
given by me to the questions therein propounded,
except for the corrections or changes in form or
substance, if any, noted in the attached Errata
Sheets.

HENRY GRABOWSKI, Ph.D. Date

Subscribed and sworn to before me this ____ day
of _____, 20____.

Notary Public

My Commission Expires:

1

E R R A T A

2

VIDEOTAPED DEPOSITION OF HENRY GRABOWSKI, Ph.D.

3

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